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 IPR2014-01342
Patent 8,004,497 B2

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

BOUCHER, *Administrative Patent Judge*.

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

On August 20, 2014, LG Electronics, Inc., LG Electronics U.S.A.,

Inc., and LG Electronics Mobilecomm U.S.A., Inc. ("Petitioner") filed a

Petition (Paper 1, "Pet.") pursuant to 35 U.S.C. §§ 311–319 to institute an

inter partes review of claims 1–4 of U.S. Patent No. 8,004,497 B2 ("the '497 patent"). Cypress Semiconductor Corp. ("Patent Owner") filed a Preliminary Response (Paper 6, "Prelim. Resp.") on December 2, 2014. Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we institute an *inter partes* review of claims 1–4. The Board has not made a final determination of the patentability of any claim.

I. BACKGROUND

A. The '497 patent (Ex. 1001)

The '497 patent describes a sensing device having capacitive sensors that detect activation of touch-sensor buttons. Ex. 1001, 17:20–22. The number of capacitive sensors in the sensing device may be fewer than the number of touch-sensor buttons. *Id.* at 18:44–48. Figures 1B and 6B are reproduced below.
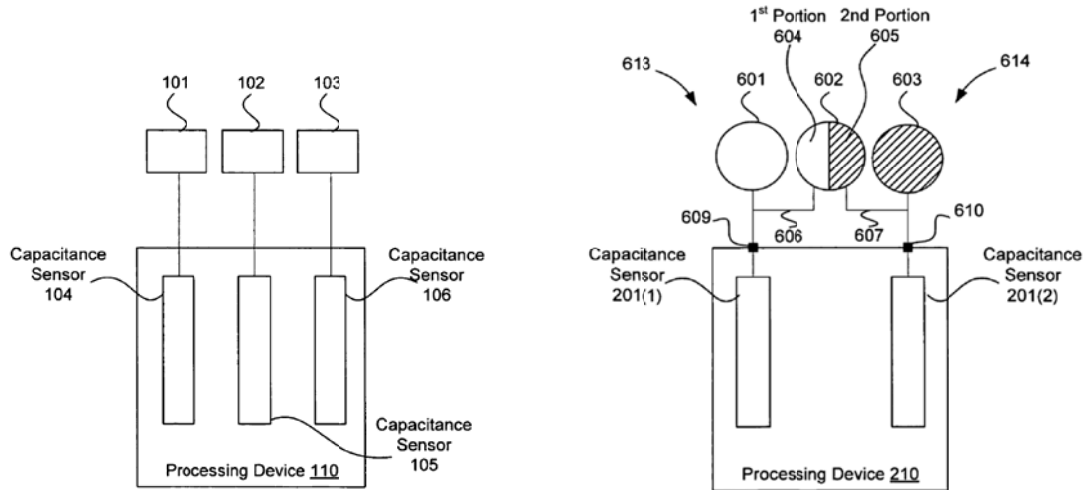
Figure 1B (left) depicts a three-button sensing device having three capacitance sensors and Figure 6B (right) depicts a three-button sensing device having two sensors.

The 1:1 correspondence of buttons and capacitance sensors shown in Figure 1B is described by the '497 patent as "conventional." *Id.* at 1:30. The ability to sense activation of a greater number of buttons with a fewer number of capacitance sensors is illustrated in Figure 6B and is achieved by electrical connections between the capacitance sensors and electrically isolated areas that define the buttons. In the example of Figure 6B, button 601 includes a sensor element having a surface area of a first conductive material shown as white; button 603 includes a sensor element having a surface area of a second conductive material shown with hash markings; and button 602 includes a sensor element having electrically isolated surface areas of the first and second conductive materials. *Id.* at 17:36–46. Each of

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the areas of the first conductive material are electrically coupled to first capacitance sensor 201(1) and each of the areas of the second conductive material are electrically coupled to second capacitance sensor 201(2). *Id.* at 17:46–55.

B. Illustrative Claim

Claim 1 of the '497 patent is illustrative of the claims at issue:

1. A method, comprising:
    detecting a presence of a conductive object on a capacitance sensing device, the sensing device comprising at least two sensing areas each coupled to a capacitance measurement input; and
    recognizing activation of at least three button performed by the detected presence of the conductive object, wherein the number of buttons is equal to at least the number of sensing areas plus one and wherein a combination of the at least two sensing areas is used to recognize at least one of the activated buttons.

C. References

Petitioner relies on the following references.

Boie	US 5,463,388	Oct. 31, 1995	Ex. 1002
Piguet	US 4,242,676	Dec. 30, 1980	Ex. 1003
Hristov	US 7,821,502 B2	Oct. 26, 2010	Ex. 1004
Matsushita	JP 10-64386	Mar. 6, 1998	Ex. 1006

D. Asserted Grounds of Unpatentability

Petitioner challenges claims 1–4 on the following grounds. Pet. 5.

Reference(s)	Basis	Claims Challenged
Boie	§ 102(b)	1 and 3
Boie and Piguet	§ 103(a)	2 and 4
Hristov, Piguet, and art described in the '497 patent	§ 103(a)	1–4
Matsushita and Piguet	§ 103(a)	1–4

E. Related Proceedings

Petitioner states that the '497 patent is a subject of the following civil action: *Cypress Semiconductor Corp. v. LG Electronics, Inc.*, No. 4:13-cv-04034-SBA (N.D. Cal.). Pet. 3.

F. Claim Construction

The Board interprets claims of an unexpired patent using the broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012). Neither Petitioner nor Patent Owner proffers any explicit construction of any claim term.

For purposes of this decision, we afford claim terms their ordinary and customary meaning as would be understood by one with ordinary skill in the art, and do not expressly construe them at this time.

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