

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTELLECTUAL VENTURES MANAGEMENT, LLC
Petitioner

v.

Patent of XILINX, INC.
Patent Owner

Case IPR2012-00023
Patent 7,994,609

Before SALLY C. MEDLEY, KARL D. EASTHOM, and JUSTIN T.
ARBES, *Administrative Patent Judges*.

EASTHOM, *Administrative Patent Judge*.

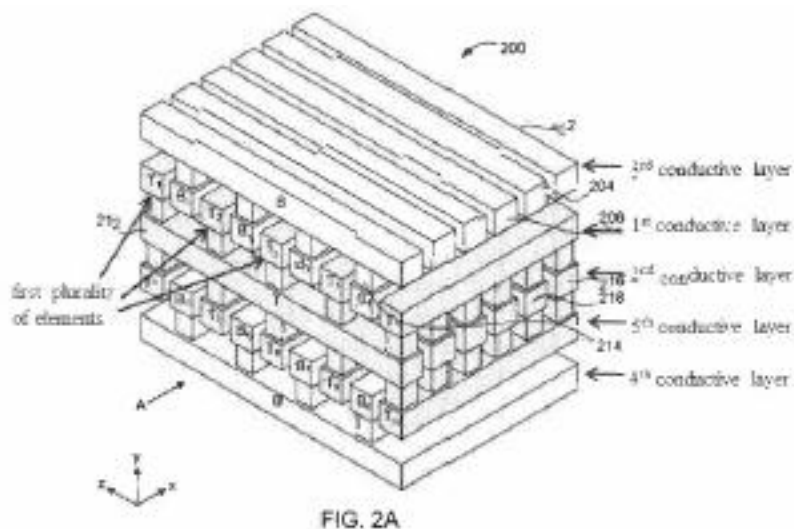
DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

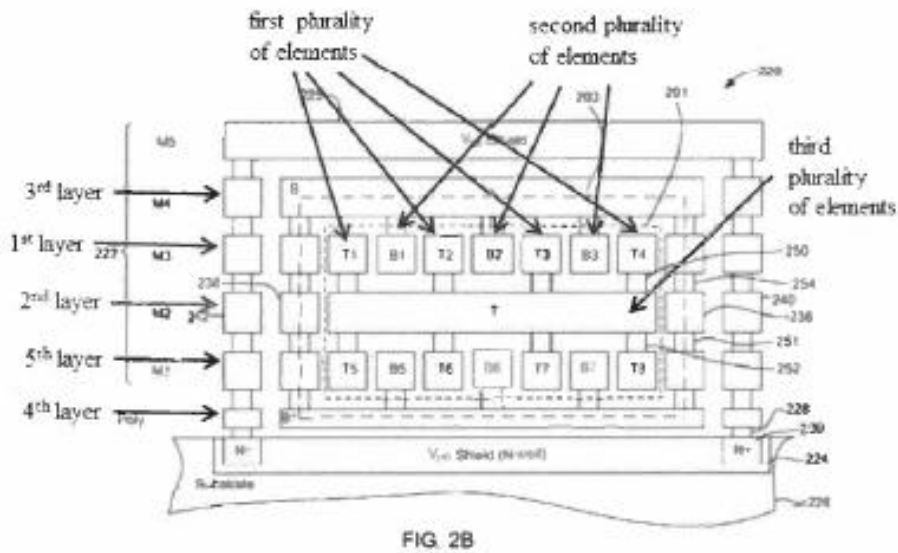
Petitioner, Intellectual Ventures Management, LLC (“IVM”), filed a petition to institute an *inter partes* review of claims 1-19 of U.S. Patent 7,994,609 owned by Xilinx, Inc. (Paper 3.) *See* 35 U.S.C. § 311. For the reasons that follow, the Board, acting on behalf of the Director, hereby institutes an *inter partes* review of the ‘609 patent. *See* 35 U.S.C. § 314.

I. INTRODUCTION

The ‘609 patent describes a shielded capacitor in an integrated circuit (IC) having a core capacitor portion which includes multiple layers of conductive elements. Shields, including a shield capacitor portion and a reference shield, surround the core capacitor portion. The shield capacitor portion has multiple conductive elements in different metal layers. According to claim 1, the shield capacitor portion forms part of a capacitor node and lies partially between the reference shield and the core capacitor portion. The shields reduce electronic noise. (*See* Ex. 1001, col. 2, l. 40 to col. 3, l. 3; col. 5, ll. 1-4; col. 6, ll. 24-31; Abstract.)

IVM annotates Figures 2A and 2B from the ‘609 patent to identify some of the disclosed elements recited in claim 1:





(Paper 3 at 4-5.)

IVM's annotated figures *supra* show the centrally located core capacitor including a first (T1, T2) and second (B1, B2) plurality of elements, the numbered conductive layers, two capacitor nodes, and shields. With respect to claim 1 (which follows) and similar claim 13, layer T corresponds to a second part of a first capacitor node, layers B and B' correspond partially to a shield capacitor portion and a second part of a second capacitor node, and the V_{DD} shield corresponds to a reference shield.

Representative claim 1 follows with bracketed information added to help illustrate an example (i.e., without limitation) structure depicted in the annotated figures *supra* representing claim elements:

1. A capacitor in an integrated circuit ("IC") comprising:
a core capacitor portion having a first plurality of conductive elements [*see* T1,T2] electrically connected to and forming a first part of a first node of the capacitor formed in a first conductive layer of the IC and a second plurality of conductive elements [*see* B1, B2] electrically connected to and forming a

first part of a second node of the capacitor formed in the first conductive layer, the first plurality of conductive elements alternating with the second plurality of conductive elements in the first conductive layer, and a third plurality of conductive elements [see T] electrically connected to and forming a second part of the first node formed in a second conductive layer adjacent to the first conductive layer, at least portions of some of the second plurality of conductive elements overlying and vertically coupling to at least portions of some of the third plurality of conductive elements;

a shield capacitor portion [see B, B'] having a fourth plurality of conductive elements formed in at least the first conductive layer of the IC, the second conductive layer of the IC, a third conductive layer of the IC, and a fourth conductive layer of the IC, the first conductive layer and the second conductive layer each being between the third conductive layer and the fourth conductive layer, the shield capacitor portion being electrically connected to and forming a second part of the second node of the capacitor and surrounding the first plurality of conductive elements and the third plurality of conductive elements; and

a reference shield [see V_{DD} Shield] electrically connected to a reference node of the IC other than the second node of the capacitor, the shield capacitor portion being disposed between the reference shield and the core capacitor portion.

IVM asserts the following six obviousness grounds of rejection under 35 U.S.C. § 103:

Ground 1. Claims 1, 3, 5, 6, and 10-12 based on Paul, U.S. 6,737,698 (May 18, 2004).

Ground 2. Claims 2 and 13-17 based on Paul and Anthony, U.S. 7,439,570 (Oct. 21, 2008).

Ground 3. Claim 4 based on Paul and Hsueh, U.S. 7,286,071 (Oct. 23, 2007).

Ground 4. Claims 7-9 based on Paul and Brennan, U.S. 6,903,918 (June 7, 2005).

Ground 5. Claims 18 and 19 based on Anthony and Marotta, U.S. 7,238,981 (July 3, 2007).

Ground 6. Claims 1 and 13 based on Anthony and Bi, U.S. Pub. 2008/0128857 (June 5, 2008).

II. DECISION ON PETITION

A. Claim Construction

The Board interprets a claim in an *inter partes* review using the “broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b). *See also* Office Patent Trial Practice Guide, 77 Fed. Reg. 48756, 48766 (Aug. 14, 2012) (*Claim Construction*). There is a “heavy presumption” that a claim term carries its ordinary and customary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). But claims “must be read in view of the specification. . . . [T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *See Phillips v. AWH Corp.*, 415 F.3d, 1303, 1317 (Fed. Circ. 2005) (en banc).

The following claim construction applies.

Shield. In the context of the ‘609 patent and as supported by Paul, a “shield” as recited in the claims includes at least one conductive layer (whether including

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