

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HOME DEPOT U.S.A., INC.,
Petitioner,

v.

H2 INTELLECT LLC,
Patent Owner.

IPR2025-00480
U.S. Patent No. 8,433,296

**PATENT OWNER'S SUR-REPLY BRIEF IN SUPPORT OF PATENT
OWNER PRELIMINARY RESPONSE**

PATENT OWNER'S EXHIBIT LIST

Exhibit No.	Description
2001	Complaint, <i>H2 Intellect LLC v. The Home Depot, Inc., et al.</i> , No. 2:24-cv-00694 (E.D. Tex. Aug. 22, 2024), ECF No. 1.
2002	Amended Complaint, <i>H2 Intellect LLC v. The Home Depot, Inc., et al.</i> , No. 2:24-cv-00694 (E.D. Tex. Jan. 9, 2025), ECF No. 26.
2003	Amended Docket Control Order, <i>H2 Intellect LLC v. The Home Depot, Inc., et al.</i> , No. 2:24-cv-00694 (E.D. Tex. Dec. 10, 2024), ECF No. 23.
2004	Complaint, <i>H2 Intellect LLC v. The Home Depot, Inc., et al.</i> , No. 2:25-cv-00123 (E.D. Tex. Feb. 3, 2025), ECF No. 1.
2005	Docket Control Order, <i>H2 Intellect LLC v. The Home Depot, Inc., et al.</i> , No. 2:25-cv-00123 (E.D. Tex. June 2, 2025), ECF No. 46.
2006	Defendants' Opposed Motion to Consolidate, <i>H2 Intellect LLC v. The Home Depot, Inc., et al.</i> , No. 2:25-cv-00123 (E.D. Tex. June 18, 2025), ECF No. 53.
2007	Plaintiff's Response in Opposition to Defendant's Motion to Consolidate, <i>H2 Intellect LLC v. The Home Depot, Inc., et al.</i> , No. 2:25-cv-00123 (E.D. Tex. July 16, 2025), ECF No. 72.
2008	U.S. District Court – Judicial Caseload Profile for the Eastern District of Texas, Administrative Office of the U.S. Courts (March 31, 2025).
2009	Declaration of Rex Mann
2010	Defendant's Preliminary Invalidity Contentions, <i>H2 Intellect LLC v. The Home Depot, Inc., et al.</i> , No. 2:24-cv-00694 (E.D. Tex.)
2011	<i>Carolyn W. Hafeman v. Google LLC et al.</i> , Case No. 24-1600, Corrected Brief for Intervenor-Acting Director of the USPTO (Dec. 30, 2024)
2012	Declaration of Ryan Hardin

2013	Home Depot 2024 Annual Report
2014	List of Patents Assigned to “Home Depot”, USPTO Patent Public Search, https://ppubs.uspto.gov/pubwebapp/ (search “USPAT” Database using query text “home depot”.as.) (last visited July 17, 2025)
2015	Complaint, <i>Ryan Hardin et al. v. Samsung Elec. Co., Ltd. et al.</i> , No. 2:21-cv-00290 (E.D. Tex. July 30, 2021), ECF No. 1
2016	Complaint, <i>Ryan Hardin et al. v. Samsung Elec. Co., Ltd. et al.</i> , No. 2:22-cv-00344 (E.D. Tex. Sep. 2, 2022), ECF No. 1
2017	Claim Construction Order, <i>Ryan Hardin et al. v. Samsung Elec. Co., Ltd. et al.</i> , No. 2:21-cv-00290 (E.D. Tex. Aug. 25, 2022), ECF No. 86
2018	U.S. Patent No. 9,779,418
2019	U.S. Patent No. 10,049,387
2020	U.S. Patent No. 10,984,447
2021	Declaration of Andrew Hill
2022	Assignment History for U.S. Patent No. 8,433,296, USPTO, https://assignment.uspto.gov/patent/index.html#/patent/search/resultAbstract?id=8433296&type=patNum (last visited July 15, 2025)
2023	Joint Motion by Plaintiffs Ryan Hardin and Andrew Hill and Defendants LG Electronics, Inc. and LG Electronics Alabama, Inc., <i>Ryan Hardin et al. v. Samsung Elec. Co., Ltd. et al.</i> , No. 2:21-cv-00290 (E.D. Tex. May 31, 2022), ECF No. 46
2024	Plaintiff's Motion For a New Trial and Partial Judgment as a Matter of Law, <i>Carolyn W. Hafeman v. LG Electronics, Inc.</i> , No. 6:21-cv-00696 (W.D. Tex. July 20, 2023), ECF No. 262
2025	Stipulation of Dismissal, <i>H2 Intellect LLC v. Int'l Business Machines Corp.</i> , No. 2:24-cv-00367 (E.D. Tex. Feb. 3, 2025), ECF No. 42

2026	Joint Motion to Stay All Deadlines and Notice of Settlement, <i>Ryan Hardin et al. v. Samsung Elec. Co., Ltd. et al.</i> , No. 2:21-cv-00290 (E.D. Tex. Feb. 2, 2023), ECF No. 224
2027	Termination Due to Settlement Institution of Trial, <i>Samsung Elec. Co., Ltd., et al. v. Ryan Hardin, et al.</i> , IPR2022-01331, Paper 24 (PTAB July 26, 2023)
2028	Declaration of Scott Denning
2029	ZIP Code™ – the Basics
2030	ZIP Code™ Tabulation Areas (ZCTAs™) - Geography, U.S. Census Bureau (archived, June 2013), https://web.archive.org/web/20130617034846/http://www.census.gov/geo/reference/zctas.html
2031	ZIP Code Tabulation Areas (ZCTAs), U.S. Census Bureau (Aug. 10, 2023)
2032	ZIP Codes are Not Area Polygons, Manifold.net, (archived, April 2005), https://web.archive.org/web/20050407232304/http://www.manifold.net:80/cases/zip_codes/zip_codes.html
2033	ZIP Codes are not Boundaries, Service Objects (Apr. 21, 2021), https://www.serviceobjects.com/blog/zip-codes-are-not-boundaries/
2034	Understanding Geographies in NaNDA: Tract10, Tract20, ZCTA10, and ZCTA20, Univ. of Michigan NaNDA (Mar. 25, 2025), https://nanda.isr.umich.edu/2025/03/25/geographies/
2035	Census Geography and Map Frequently Asked Questions, U.S. Census Bureau
2036	ZIP Code® Tabulation Areas (ZCTAs™), U.S. Census Bureau (Jan. 11, 2000) (archived, Jan. 2000) https://web.archive.org/web/20000304081143/http://www.census.gov:80/geo/ZCTA/

2037	ZCTAs™: Zip Code Tabulation Areas for Census Data Products, U.S. Census Bureau, ZCTA/99 (June 1999)
2038	ZIP Code® Tabulation Areas (ZCTAs™) For Census 2000 Dress Rehearsal Data Products, U.S. Census Bureau (1999)
2039	Noelke et al., <i>COI 2.0 ZIP CODE DATA, Technical Details</i> , Brandeis, The Heller School for Social Policy and Management, January 8, 2022
2040	Frank Donnelly, <i>The Trouble with ZIP Codes: Solutions for Data Analysis and Mapping</i> , At These Coordinates (May 11, 2020)
2041	Matt Forrest, <i>Stop Using Zip Codes for Geospatial Analysis</i> , Carto (Aug. 8, 2019) (https://carto.com/blog/zip-codes-spatial-analysis)
2042	Excerpts from the Deposition of Ryan Hardin (Sept. 27, 2022)

TABLE OF ABBREVIATIONS

H2 Intellect LLC (Patent Owner)	H2
Home Depot U.S.A., Inc. (Petitioner)	HD
Petition for Inter Partes Review (Paper 1)	Pet.
Patent Owner Preliminary Response (Paper 8)	POPR
Petitioner's Reply to POPR (Paper 13)	Reply
United States Patent No. 8,433,296	296 Patent
All Emphasis Added	

HD has concocted an alleged claim construction dispute in a transparent attempt to fill gaps in its Petition—asserting that ZIP codes have perimeters that define geographic areas. The undisputed, objective evidence in the POPR proves they do not, and HD's Reply provides no rebuttal. HD's Petition fails; it does not show a reasonable likelihood of success for any claim.

As to the claim construction “dispute” that HD drummed up to justify its Reply, limitation 1[b] requires “establishing a plurality of perimeters defining a plurality of geographic areas.” The 296 Patent teaches an interactive platform establishing perimeters (EX-1001, Abstract) with sponsors: “the sponsor can establish perimeters defining geographic areas [—] areas the sponsor wishes to reserve....” *Id.*, [8:40-45], Fig. 4. The perimeters “may be generated interactively, using sponsor established perimeter definitions” or selected by “presenting sponsors a choice from among previously established options.” *Id.*, [8:60-65].

HD's assertion that H2 is trying to “read out” embodiments regarding this limitation is false. The perimeters become “established,” which, consistent with the specification, includes generating the perimeters or selecting pre-established perimeters. H2 never argued differently. *See* POPR, 28 (“The challenged claims require the *establishment* of ‘perimeters’ that define ‘geographic areas,’ not merely the use of pre-existing postal codes or labels.”). But HD's argument—that merely “using” pre-existing boundaries is enough—ignores the plain meaning of

“establishing” and the 296 Patent’s teachings.

Turning to HD’s improper prior art arguments, HD concedes that Elliott does not describe limitation 1[b] and relies solely on Jacob’s disclosure of ZIP codes for this. Pet., 21 (alleging that one of Jacob’s “advertisement attributes includes geographic location specified as a zip code”). HD then makes up a truism (with no evidence) to reach its desired conclusion: “A ZIP code is well-known to be a pre-established perimeter that defines a geographic area. Therefore, Jacob’s ZIP codes constitute a plurality of perimeters that define a plurality of geographic areas.” *Id.*, 22. But as H2 proved, ZIP codes are **not** perimeters defining geographic areas. In contrast to the Petition’s *ipse dixit*, H2 cited copious objective evidence confirming this. POPR, 20-24. Thus, Jacob does not disclose limitation 1[b], “establishing a plurality of perimeters defining a plurality of geographic areas.”

HD alleges that Jacob discloses “city, village, and suburb borders.” Reply, 2. But implying that Jacob uses borders to establish a perimeter as the claim requires is misleading. Instead, Jacob identifies ZIP codes as a proxy and uses them (**not** borders) for determining whether to send an ad to a mobile unit. *See* EX-1005, [0028], [0029] (disclosing, e.g., “**target[ing] [mobile] units that are located essentially within the three ZIP codes that designate** the postal zones in suburb A.”). This is not sufficient because ZIP codes are not perimeters that define a geographic area. Indeed, the word “perimeter” cannot be found anywhere in Jacob.

And the Petition never identifies the “city, village, and suburb borders” for limitation 1[b]—instead, the Petition only identifies ZIP codes. *See* Pet., 21-22.

HD then quote mines the 296 Patent—“perimeters can also be defined by...a physical address” (Reply, 2); but at 8:48-51 the Patent teaches this—perimeters defined by “*geometric constructs*,” having “a given *relative position to*” “a physical address.” And still, a ZIP code does not define a boundary but instead is a “tool for mail delivery” to such a physical address. POPR, 21.

HD’s argument (Reply, 2) that EX-2032’s image showing a ZIP code is a “collection of addresses with a perimeter” and “constitutes a geographic area” is the exact *opposite* of what the very authors of EX-2032 explain—the “common misconception” that “Zip codes ... are polygonal regions or areas” and that “any map that purports to show ‘Zip Code Areas’ or ‘Zip Code Polygons’ is *not an accurate map*. It is at best some sort of approximation and most likely is *wildly inaccurate* in certain regions.” *Id.*, 1-2. EX-2032 itself refutes HD’s argument.¹

For these reasons, and those in the POPR, the Petition should be denied.

¹ H2 is not excluding circles or non-contiguous areas, as HD argues. The 296 Patent includes circles. EX-1001, Fig. 3, 4:30-33. Circles, like polygons, have areas, but ZIP codes do not define a perimeter or areas of any type. EX-2040 (“ZIP Codes are actually *not areas with defined boundaries*”); POPR, 21-24.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 18th day of September, 2025, I caused to be served a true and correct copy of the foregoing “Patent Owner’s Sur-Reply in Support of Patent Owner Preliminary Response” by electronic mail on the following:

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