

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

BRAIN CORPORATION,

Plaintiff,

v.

AVIDBOTS CORP. AND AVIDBOTS USA
CORP.,

Defendant.

Case No. 1:24-cv-12569

Honorable Jeremy C. Daniel

DEFENDANT AVIDBOTS'S FINAL INVALIDITY CONTENTIONS

[REDACTED]

Exhibits	Reference	Type
	moveable objects,” IEEE International Conference on Robotics and Automation 6115-6120 (2011) (“Scholz”)	
A-12 B-11	Avidbots System Art ⁶	System
C-1 D-1	Stachniss et al., <i>Springer Handbook of Robotics, Chapter 46: Simultaneous Localization and Mapping</i> , Springer (2d ed.) (Jan. 1, 2016) (“Stachniss”)	Non-Patent Literature
D-11	Prassler et al., <i>Springer Handbook of Robotics, Chapter 65: Domestic Robots</i> , Springer (2d ed.) (Jan. 1, 2016) (“Prassler”)	Non-Patent Literature
C-3 D-10	U.S. Patent No. 9,538,892 (“Fong (892)”)	Patent

⁶ The Avidbots System Art includes Avidbots’s system prior art that Avidbots understands to have been patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the ’780 patent, see Avidbots’s First Supplemental Invalidity Contentions, § III.B.1.C, and therefore qualifies as prior art under at least 35 U.S.C. §§ 102(a)(1) and (2). Specifically, the designated Exhibits address the Avidbots ARS-2 and the Avidbots Neo. The Avidbots ARS-2 refers to an autonomous commercial floor cleaner that was in public use and/or on sale by at least October 21, 2015. For example, the ARS-2 was publicly displayed at the ISSA/Interclean 2015 showcase in Las Vegas, Nevada, for three days, from October 21 to October 23, 2015, prior to the filing of the ’780 patent on November 2, 2016. ISSA/Interclean Exhibitor List & Floor Plan, <https://www.cleantlink.com/sm/graphics/15/09/sm0915.pdf> at pg. 69, last accessed May 15, 2025. Avidbots negotiated and executed its first sale of the ARS-2 on the third day of that event, on October 23, 2015. AVID0007849–AVID0007850. The ARS-2 was also publicly demonstrated at Mohawk College of Applied Arts and Technology in Hamilton, Ontario, Canada, and deployed at the college for two weeks, from December 8 to December 21, 2015. AVID0022649–AVID0022655. Mohawk College employees witnessed and graded the performance of the ARS-2’s automated coverage, cleaning quality, ease of use, and safety. AVID0022653. Avidbots also gave Mohawk College employee Keith Brewster a tutorial on mapping using the ARS-2. AVID0022649. The Avidbots Neo refers to an autonomous commercial floor cleaner that was in public use and/or on sale by at least August 24, 2016, prior to the filing of the ’780 patent on November 2, 2016. For example, the Neo was publicly demonstrated at the Avidbots Headquarters in Ontario, Canada, on August 24, 2016, to employees of the Rochester Institute of Technology (RIT). AVID0517413–AVID0517414. RIT requested this demonstration through Avidbots’s web portal on July 9, 2016. AVID0517411. Avidbots followed this demonstration in Ontario with another public demonstration, this time on-site at RIT, in Rochester, New York, in or around October 4, 2016. AVID0031247, at -255. It was also publicly demonstrated in Indianapolis, Indiana, from October 17 to October 20, 2016, for representatives for Simon Properties. Id.

Moreover, Brain's vague allegations on long-felt need, commercial success, industry recognition, and copying are untethered to the Asserted Claims. Brain establishes no nexus between the claims and any of the alleged secondary indicia of non-obviousness. Thus, Avidbots disagree that these are evidence of secondary considerations of nonobviousness tied to the Challenged Claims. To the extent Brain alleges that any secondary considerations of non-obviousness are tied to the Challenged Claims, Avidbots reserves the right to address such allegations. In any event, where, as here, there is a strong showing of obviousness, the Federal Circuit has held that even relevant secondary considerations supported by substantial evidence do not dislodge the primary conclusion of obviousness. *Ohio Willow Wood Co. v. Alps S., LLC*, 735 F.3d 1333, 1344 (Fed. Cir. 2013).

3. Prior Art Date

U.S. Application No. 15/341,612 (hereinafter, "the '612 application"), which led to the '780 Patent, was filed on November 2, 2016. To the extent that Plaintiff asserts that the '780 Patent is entitled to an earlier priority date based on any provisional application, or that certain references are not prior art due to a disclosure under 35 U.S.C. § 102(b)(1)(B), Plaintiff has the burden of proof and has not demonstrated an earlier priority date. *See* § I.A, *supra*.

D. Prior Art Invalidity of U.S. Patent No. 10,379,539

Each Asserted Claim of the '539 Patent is invalid at least in view of the prior art invalidity grounds outlined in this section.

Further, Avidbots has filed Petitions for Inter Partes Review ("IPR") with the United States Patent and Trademark Office ("PTO"), seeking to invalidate all claims in each of the five Brain patents that are at issue in this lawsuit. ECF 104; Case No. IPR2025-01600 (Petition for IPR of the '780 Patent); IPR2025-01601 (Petition for IPR of the '539 Patent); Case No. IPR2025-01602 (Petition for IPR of the '325 Patent); Case No. IPR2025-01603 (Petition for IPR of the '576

Patent); IPR2025-01604 (Petition for IPR of the '436 Patent). To the extent that the grounds set forth in this are the same or similar to those laid out in Avidbots's Petitions for IPR of Brain's Asserted Patents, those Petitions and all supporting documents attached thereto, including motivations to combine, are incorporated by reference in this section as if fully set forth herein.

In light of Brain's deficient infringement contentions, Avidbots reserves the right to amend these contentions as Brain's positions in this case (and/or the known facts of the case) develop. Avidbots further reserves the right to amend these contentions in response to a ruling from the Court, including any Claim Construction. Such amendment may include, without limitation, inclusion or substitution of different references, whether now known or unknown, and identification of further disclosures within the references described below and in the exhibits to these Final Contentions wherein each element of the Asserted Claims of the '539 Patent are found.

1. Asserted Prior Art and Grounds

Avidbots identifies in the table below prior art now known to Avidbots that anticipates and/or renders obvious the Asserted Claims of the '539 Patent. Each of the following patents, publications, systems, and products is prior art under at least 35 U.S.C. §§ 102(a)(1) or (2), as applicable. Avidbots's reliance on each prior art reference below includes the reference itself, anything incorporated by the reference, and any testimony by those with knowledge of the reference, such as named authors and inventors.

The exhibits listed in the table below are charts setting forth where in the prior art references each element of the Asserted Claims of the '539 Patent are found.

Exhibit²⁰	Reference
B-13	U.S. Patent No. 9,216,745 ("Beardsley")

²⁰ See *supra* note 19.

Exhibit²⁰	Reference
B-12	Chang, Ya-Chun, Yamamoto, Yoshio, On-line path planning strategy integrated with collision and dead-lock avoidance schemes for wheeled mobile robot in indoor environments, Industrial Robot, An International Journal 35(5) 421-34 (2008) ("Yamamoto")
B-15	O. Khatib, "Real-Time Obstacle Avoidance For Manipulators and Mobile Robots," 5 Int'l J. of Robotics Research 90-98 (1986) ("Khatib")
B-15	J.A. Castellanos, J. Montiel, J. Neira, J.D Tardos, "The SPmap: A probabilistic framework for simultaneous localization and map building," 15(5) IEEE Trans. Robotics and Automation 948-952 (1999) ("Castellanos")
B-15	J. Scholz, S. Chitta, B. Marthi and M. Likhachev, "Cart pushing with a mobile manipulation system: Towards navigation with moveable objects," IEEE International Conference on Robotics and Automation 6115-6120 (2011) ("Scholz")
B-11	Avidbots System Art

Avidbots further identifies that these references form the following invalidity grounds for each of the Asserted Claims of the '539 Patent.

Ground No.	Type	Reference(s)	Claims
1	Obviousness	Obvious in view of Beardsley in combination with Castellanos.	1, 3, 4, 6
2	Obviousness	Obvious in view of Beardsley in combination with Castellanos and Khatib.	1, 3, 4, 6
3	Obviousness	Obvious in view of Yamamoto in combination with Khatib.	1, 4, 6
4	Obviousness	Obvious in view of Beardsley in combination with Castellanos and Scholz.	3
5	Obviousness	Obvious in view of Avidbots System Art in combination with Beardsley, Khatib, and Scholz.	1, 3, 4, 6