

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner

v.

THL HOLDING COMPANY, LLC,

Patent Owner

Case No. IPR2024-00399

Patent No. 11,350,246 (Claims 1-19)

PETITIONER'S UPDATED EXHIBIT LIST

Exhibit 1001	U.S. Patent No. 11,350,246 to Howard et al.
Exhibit 1002	File History of U.S. Patent No. 11,350,246
Exhibit 1003	Declaration of R. Michael Buehrer, Ph.D.
Exhibit 1004	U.S. Patent Publication No. 2008/0068265A1 to Kalliola et al.
Exhibit 1005	U.S. Patent No. 6,487,595 to Turunen et al.
Exhibit 1006	U.S. Patent Publication No. 2008/0204322A1 to Oswald et al.
Exhibit 1007	U.S. Patent Publication No. 2008/0320587A1 to Vauclair et al.
Exhibit 1008	U.S. Patent Publication No. 2008/0125040A1 to Kalayjian
Exhibit 1009	U.S. Patent Publication No. 2009/0058651 to Thorn
Exhibit 1010	U.S. Patent Publication No. 2010/0279652 to Sharp et al.
Exhibit 1011	THL's Opening Claim Construction Brief dated September 14, 2023
Exhibit 1012	Expert Report of Dr. Martin J. Feuerstein Rebutting Apple's Proposed Construction of "Signal Delay"
Exhibit 1013	THL's Infringement Contentions
Exhibit 1014	ISO/IEC 24730-2:2006(E) <i>Information technology – Real-time locating systems (RTLS) – Part 2: 2,4 GHz air interface protocol</i> . International Organization for Standardization and the International Electrotechnical Commission (2006)
Exhibit 1015	Hui Liu, Houshang Darabi, Pat Banerjee, and Jing Liu, <i>Survey of Wireless Indoor Positioning Techniques and Systems</i> , IEEE Transactions on Systems, Man, and Cybernetics-Part C: Applications and Reviews, Vol. 37, No. 6 (November 2007)
Exhibit 1016	<i>A Comprehensive Look into the RTLS System</i> , https://www.mokosmart.com/look-into-rtls-system/ (August 2021, retrieved August 25, 2023)
Exhibit 1017	Roy Want, Andy Hopper, Veronica Falcão, and Jonathan Gibbons, <i>The Active Badge Location System</i> , ACM Transactions on Information Systems, Vol. 10, No. 1 (January 1992)
Exhibit 1018	Paramvir Bahl and Venkata N. Padmanabhan, <i>RADAR: An In-Building RF-based User Location and Tracking System</i> , Proceedings IEEE INFOCOM 2000. Conference on Computer Communications. Nineteenth Annual Joint Conference of the IEEE Computer and Communications Societies pp. 775-784 vol.2, (March 2000)
Exhibit 1019	Bob Paddock, <i>A Guide to online information about: Radio Frequency Identification (RFID)</i> ,

	https://web.archive.org/web/20060513161655/http://archive.chipcenter.com/circuitcellar/october00/c1000rp52.htm (August 2001, retrieved September 7, 2023)
Exhibit 1020	Gwen Moritz, <i>Larry W. Fullerton: World Class Innovator, Arkansas Business</i> , https://www.arkansasbusiness.com/article/58921/larry-w-fullerton-world-class-innovator (Apr. 15, 2002)
Exhibit 1021	IEEE Standard for Information technology– Local and metropolitan area networks– Specific requirements– Part 15.4: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for Low-Rate Wireless Personal Area Networks (WPANs): Amendment 1: Add Alternate PHYs, IEEE Std 802.15.4a-2007 (Amendment to IEEE Std 802.15.4-2006) (2007)
Exhibit 1022	Kaveh Pahlavan, Xinrong Li, and Juha-Pekka Mäkelä, <i>Indoor Geolocation Science and Technology</i> , IEEE Communications Magazine (March 2002)
Exhibit 1023	Jeffrey Hightower and Gaetano Borriello, <i>A Survey and Taxonomy of Location Systems for Ubiquitous Computing</i> , Technical Report UW-CSE 01-08-03 (August 2001)
Exhibit 1024	<i>PARC History – A Legacy of Innovation and Inventing the Future</i> , https://www.parc.com/about-parc/parc-history/ (retrieved June 26, 2023)
Exhibit 1025	Guifx, <i>Touchscreens That Changed the World</i> , https://www.guifx.com/touchscreens-that-changed-the-world/ (retrieved June 26, 2023)
Exhibit 1026	<i>iPhone User’s Guide</i> , Apple Inc. (2007)
Exhibit 1027	<i>Majority of smart phones now have touch screens</i> , https://www.canalys.com/newsroom/majority-smart-phones-now-have-touch-screens 2/7 (February 8, 2010, retrieved October 11, 2023)
Exhibit 1028	Steve Kolokowsky and Trevor Davis, <i>Touchscreens 101: Understanding Touchscreen Technology and Design</i> , Cypress Semiconductor Corp. (June 2009)
Exhibit 1029	U.S. Patent Publication No. 2006/0026521A1 to Hotelling et al.
Exhibit 1030	<i>The History of Bluetooth</i> , The History of Bluetooth - Auris, Inc (theauris.com) Auris, Inc. (retrieved June 26, 2023)
Exhibit 1031	<i>Ericsson T39 User’s Guide First Edition</i> , Ericsson Mobile Communications AB (March 2001)

Exhibit 1032	<i>How does Bluetooth work?</i> , Scientific American https://www.scientificamerican.com/article/experts-how-does-bluetooth-work/#:~:text=Bluetooth%20technology%20uses%20the%20principles,devices%20that%20are%20actively%20inquiring,(November 5, 2007, retrieved September 8, 2023)
Exhibit 1033	IEEE Std. 802.15.1-2005, entitled “IEEE Standard for Information technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements—Part 15.1: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for Wireless Personal Area Networks (WPANs)”
Exhibit 1034	<i>Specification of the Bluetooth System</i> , Bluetooth Core Specification version 1.2 (05 November 2003) (“Bluetooth Specification”)
Exhibit 1035	Varun Almaulu and David Cheng, <i>Bluetooth Triangulator</i> , Department of Computer Science and Engineering, University of California, San Diego, (2006)
Exhibit 1036	Josef Hallberg, Marcus Nilsson, Kåre Synnes, <i>Positioning with Bluetooth</i> , 10 th International Conference on Telecommunications (April 2003)
Exhibit 1037	Julie A. Kientz, Shwetak N. Patel, Arwa Z. Tyebkhan, Brian Gane, Jennifer Wiley, and Gregory D. Abowd, <i>Where’s My Stuff? Design and Evaluation of a Mobile System for Locating Lost Items for the Visually Impaired</i> , Proceedings of the 8 th international ACM SIGACCESS conference on Computers and accessibility (October 2006)
Exhibit 1038	Harry Newton, <u>Newton’s Telecom Dictionary</u> (20th updated and expanded edition ed. 2004)
Exhibit 1039	P. Orsatti, F. Piazza & Q. Huang, <i>A 20-mA-Receive, 55-mA-Transmit, Single-Chip GSM Transceiver in 0.25-/Spl Mu/m CMOS</i> , 34 IEEE Journal of Solid-State Circuits 1869 (1999)
Exhibit 1040	Aaron Beach, Mike Gartrell & Richard Han, <i>Solutions to Security and Privacy Issues in Mobile Social Networking</i> , 4 in 2009 International Conference on Computational Science and Engineering 1036 (2009)
Exhibit 1041	Christian Bettstetter, Hans-Jorg Vogel & Jorg Eberspacher, <i>GSM Phase 2+ General Packet Radio Service GPRS: Architecture, Protocols, and Air Interface</i> , 2 IEEE Communications Surveys 2 (1999)

Exhibit 1042	J.C. Haartsen & S. Mattisson, <i>Bluetooth-A New Low-Power Radio Interface Providing Short-Range Connectivity</i> , 88 Proceedings of the IEEE 1651 (2000)
Exhibit 1043	T.Q.S. Quek & M.Z. Win, <i>Analysis of UWB Transmitted-Reference Communication Systems in Dense Multipath Channels</i> , 23 IEEE Journal on Selected Areas in Communications 1863 (2005)
Exhibit 1044	S. Venkatesh and R. M. Buehrer, <i>Multiple-access insights from bounds on sensor localization</i> , 2006 International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM'06), Buffalo-Niagara Falls, NY, USA, (2006)
Exhibit 1045	Christian Gehrmann, Joakim Persson & Ben Smeets, <u>Bluetooth Security</u> (2004)
Exhibit 1046	Deposition Transcript of Dr. Martin Feuerstein dated December 11, 2024
Exhibit 1047	Supplemental Declaration of Dr. Michael Buehrer
Exhibit 1048	Tony Atkins & Marcel Escudier, <u>Oxford Dictionary of Mechanical Engineering</u> (2013)
Exhibit 1049	Chun-Wang Tsou & Chun-Hsiung Liao, <i>Investigating the Antecedents of Intentions to Purchase a Netbook as a Second Laptop</i> , in 2010 International Conference on Education and Management Technology 285 (2010)
Exhibit 1050	Dan Ackerman, <i>Asus Eee PC 1005HA Review: Asus Eee PC 1005HA</i> , CNET, https://www.cnet.com/reviews/asus-eee-pc-1005ha-review/ (June 22, 2009; retrieved Jan 7, 2025)
Exhibit 1051	José L. Pons, <u>Wearable Robots: Biomechatronic Exoskeletons</u> (2008)
Exhibit 1052	Harry Newton, <u>Newton's Telecom Dictionary</u> (20th updated and expanded edition ed. 2004)
Exhibit 1053	<i>The History of Gyroscopes – From Humble Beginnings to Hyper Technology</i> , Advanced Navigation (2023), https://www.advancednavigation.com/tech-articles/the-history-of-gyroscopes-from-humble-beginnings-to-hyper-technology/ (last visited Jan 22, 2025)
Exhibit 1054	Petitioner's Demonstratives

Respectfully submitted,

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CERTIFICATE OF SERVICE ON PATENT OWNER
UNDER 37 C.F.R. § 42.6

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on April 24, 2025, the foregoing *Petitioner's Updated Exhibit List with EX1054 Petitioner's Demonstratives* were served via electronic filing with the Board and via Electronic Mail on the following counsel of record for Patent Owner:

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