

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

GREENTHREAD, LLC

Plaintiff,

vs.

**WESTERN DIGITAL CORPORATION; AND
WESTERN DIGITAL TECHNOLOGIES, INC.**

Defendants.

Civil Action No.

JURY TRIAL DEMANDED

ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Greenthread, LLC (“Greenthread” or “Plaintiff”) files this Original Complaint against Western Digital Corporation and Western Digital Technologies, Inc. (collectively “Western Digital” or “Defendants”) hereby alleges as follows:

THE NATURE OF THE ACTION

1. Greenthread owns a family of patents related to transistors and other components of integrated semiconductor devices. Greenthread’s patented inventions describe semiconductor devices that employ graded dopants and well regions for creating electric fields for aiding and/or limiting the movement of carriers to (or from) the semiconductor surface to (or from) the semiconductor substrate. These inventions improve semiconductor devices by (1) creating faster, more efficient, and more reliable processors, logic devices, DRAM and NAND flash, and image sensors and (2) allowing manufacturers to scale down the feature size of their semiconductor products.

2. Defendants have infringed and continue to infringe six Greenthread patents: U.S. Patent Nos. 8,421,195 (the “195 Patent”), 9,190,502 (the “502 Patent”), 10,510,842 (the “842

Patent”), 10,734,481 (the “481 Patent”), 11,121,222 (the “222 Patent”), and 11,316,014 (the “014 Patent”), (collectively “the Greenthread Patents”), copies of which are attached hereto as Exhibits 1-6, respectively. Defendants have infringed and continue to infringe the Greenthread Patents by making, using, selling, offering for sale, and/or importing into the United States, semiconductor devices with infringing graded dopant regions and/or electronic products containing the same.

THE PARTIES

3. Plaintiff Greenthread, LLC (“Greenthread”) is a limited liability company organized and existing under the laws of Texas, having its principal place of business at 7424 Mason Dells Drive, Dallas, Texas 75230-3244.

4. Defendant Western Digital Corporation is a corporation organized and existing under the laws of Delaware with its headquarters at 5601 Great Oaks Parkway, San Jose, CA 95119.

5. Defendant Western Digital Technologies, Inc. is a corporation organized and existing under the laws of Delaware with its headquarters at 5601 Great Oaks Parkway, San Jose, CA 95119. Upon information and belief, Western Digital Technologies, Inc. is a subsidiary of Western Digital Corporation.

SUBJECT MATTER JURISDICTION

6. This court has subject matter jurisdiction over the patent infringement claims asserted in this case under 28 U.S.C. §§ 1331 and 1338(a).

PERSONAL JURISDICTION, VENUE, AND JOINDER

7. Western Digital is a developer, manufacturer, and provider of data storage devices

and solutions, including flash-based solid state drives (“SSDs”). Western Digital offers a broad line of storage solutions, including client devices; data center devices and solutions; and client solutions. Western Digital’s client solution devices include SSDs embedded into external storage products and removable flash-based products, which include cards, universal serial bus (“USB”) thumb drives, and wireless devices. Western Digital offers client portable SSDs with a range of capacities and performance characteristics to address a broad spectrum of the client storage market. The removable cards are designed primarily for use in consumer devices, such as mobile phones, tablets, imaging systems, cameras, and smart video systems. The USB flash drives are used in the computing and consumer markets and are designed for high-performance and reliability.

8. Western Digital’s products are offered under the Western Digital, G-Technology, HGST, SanDisk, Upthere, and WD brands. Western Digital sells its products to customers, including customers in this District, in the computer, networking and storage, consumer electronics, and mobile telecommunications markets.

9. Each of the Defendants develops, designs, manufactures, distributes, markets, offers to sell, or sells infringing products or services within the United States, including in this District, and otherwise purposefully directs infringing activities in this District.

10. The “Western Digital Accused Products” (defined below) are Western Digital products accused of meeting the claim limitations of a Greenthread Patent in this suit; an exemplar, non-exhaustive list of such products is included in Exhibit 8.

11. Exhibit 8 demonstrates how exemplary Western Digital Accused Products meet the claim limitations of Greenthread Patents is herein incorporated by reference. As shown in Exhibit 8, the exemplary SanDisk 15nm 16 GB NAND flash memory meets each and every element of at least one claim of the Greenthread Patents.

12. This Court has specific personal jurisdiction over Defendants because they have committed acts within this District giving rise to this action (including acts of infringement) and have established minimum contacts with this forum such that the exercise of jurisdiction over Defendants would not offend traditional notions of fair play and substantial justice.

13. The Court has general personal jurisdiction over Defendants because they are incorporated in Delaware.

14. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391 and 1400(b) because Defendants reside in this District and have committed acts of infringement in this district.

THE GREENTHREAD PATENTS

15. On April 16, 2013, the U.S. Patent and Trademark Office duly and legally issued U.S. Patent No. 8,421,195 (“the ’195 Patent”), entitled “Semiconductor Devices with Graded Dopant Regions,” listing Dr. Mohan Rao as the inventor, from a patent application filed January 12, 2007. The ’195 Patent claims priority from U.S. Patent Application No. 10/934,915,¹ filed on September 3, 2004. A true and correct copy of the ’195 Patent is attached hereto as Exhibit 1 and incorporated herein by reference.

16. On November 17, 2015, the U.S. Patent and Trademark Office duly and legally issued U.S. Patent No. 9,190,502 (“the ’502 Patent”), entitled “Semiconductor Devices with Graded Dopant Regions,” listing Dr. Mohan Rao as the inventor, from a patent application filed October 16, 2014. The ’502 Patent claims priority from U.S. Patent Application No. 10/934,915,² filed on September 3, 2004. A true and correct copy of the ’502 Patent is attached hereto as Exhibit 2 and incorporated herein by reference.

¹ Pub. No. US 2006/0049464.

² Pub. No. US 2006/0049464.

17. On December 17, 2019, the U.S. Patent and Trademark Office duly and legally issued U.S. Patent No. 10,510,842 (“the ’842 Patent”), entitled “Semiconductor Devices with Graded Dopant Regions,” listing Dr. Mohan Rao as the inventor, from a patent application filed on May 9, 2017. The ’842 Patent claims priority from U.S. Patent Application No. 10/934,915,³ filed on September 3, 2004. A true and correct copy of the ’842 Patent is attached hereto as Exhibit 3 and incorporated herein by reference.

18. On August 4, 2020, the U.S. Patent and Trademark Office duly and legally issued U.S. Patent No. 10,734,481 (“the ’481 Patent”), entitled “Semiconductor Devices with Graded Dopant Regions,” listing Dr. Mohan Rao as the inventor, from a patent application filed on December 17, 2019. The ’481 Patent claims priority from U.S. Patent Application No. 10/934,915,⁴ filed on September 3, 2004. A true and correct copy of the ’481 Patent is attached hereto as Exhibit 4 and incorporated herein by reference.

19. On September 14, 2021, the U.S. Patent and Trademark Office duly and legally issued U.S. Patent No. 11,121,222 (“the ’222 Patent”), entitled “Semiconductor Devices with Graded Dopant Regions,” listing Dr. Mohan Rao as the inventor, from a patent application filed on July 27, 2020. The ’222 Patent claims priority from U.S. Patent Application No. 10/934,915,⁵ filed on September 3, 2004. A true and correct copy of the ’222 Patent is attached hereto as Exhibit 5 and incorporated herein by reference.

20. On April 26, 2022, the U.S. Patent and Trademark Office duly and legally issued U.S. Patent No. 11,316,014 (“the ’014 Patent”), entitled “Semiconductor Devices with Graded Dopant Regions,” listing Dr. Mohan Rao as the inventor, from a patent application filed on July 9,

³ Pub. No. US 2006/0049464.

⁴ Pub. No. US 2006/0049464.

⁵ Pub. No. US 2006/0049464.

2021. The '014 Patent claims priority from U.S. Patent Application No. 10/934,915,⁶ filed on September 3, 2004. A true and correct copy of the '014 Patent is attached hereto as Exhibit 6 and incorporated herein by reference.

21. The '195, '502, '842, '481, '222, and '014 Patents are collectively referred to as the "Greenthread Patents."

22. Greenthread exclusively owns all rights, title, and interest in the Greenthread Patents necessary to bring this action, including the right to recover past and future damages. Certain of the Greenthread Patents were previously owned by Dr. G.R. Mohan Rao ("Dr. Rao"). On April 27, 2015, Dr. Rao assigned to Greenthread the then-issued Greenthread Patents and all related "continuations, continuations-in-part and extensions of said Applications and Patents and any pending applications or issued patents that directly claim or are amended to claim priority to any of the Applications or Patents." Dr. Rao's assignment was recorded with the U.S. Patent and Trademark Office on May 13, 2015, and again on July 22, 2021, and is attached hereto as Exhibit 7. Greenthread has therefore owned all rights to the Greenthread Patents necessary to bring this action throughout the period of Western Digital's infringement and still owns those rights to the Greenthread Patents.

23. Defendants are not currently licensed to practice the Greenthread Patents.

24. The Greenthread Patents are valid and enforceable.

FACTUAL BACKGROUND

25. Dr. G.R. Mohan Rao ("Dr. Rao"), the sole inventor of the Greenthread Patents, has been an innovator in the semiconductor industry since the 1960s. He is a named inventor on more than 100 Patents worldwide and authored numerous technical publications over the last 50 years.

⁶ Pub. No. US 2006/0049464.

26. In September 1968, Dr. Rao received a Ph.D. in physics with a specialization in electronics from Andhra University in Waltair, India. He then traveled to the United States to attend a graduate program in physics at the University of Cincinnati.

27. After learning of an opportunity to work with Professor William Carr of Southern Methodist University (“SMU”), Dr. Rao transferred to SMU where he earned a Ph.D. in Electrical Engineering. While there, he worked in the SMU laboratory with Jack Kilby of Texas Instruments (a pioneering electrical engineer who would later receive a Nobel Prize for his work), on metal-oxide-silicon transistors (“MOS devices”), which are used for switching and amplifying electronic signals in electronic devices. MOS devices form the basis of modern electronics and are the most widely used semiconductor devices in the world. The U.S. Patent and Trademark Office has called this device a “groundbreaking invention that transformed life and culture around the world.”⁷ Dr. Rao built these devices from scratch while a graduate student at SMU.

28. Through his mentor, Jack Kilby, Dr. Rao interviewed with—and was ultimately hired by—Texas Instruments to continue his work on MOS devices in 1972. Dr. Rao worked at Texas Instruments for the next twenty-two years, rising from an engineer to a Senior Fellow. At that time, Texas Instruments had only 12 Senior Fellows out of approximately 20,000 engineers. Eventually, Dr. Rao moved into a management position at Texas Instruments, ultimately becoming a Senior Vice President in 1985.

29. At Texas Instruments, Dr. Rao received his first patent while working in a process and product engineering capacity to solve a production problem with Texas Instruments’ 4-kilobit RAM product. That patent was merely the beginning of Dr. Rao’s long inventive career. Indeed,

⁷ <https://www.uspto.gov/about-us/news-updates/remarks-director-iancu-2019-international-lectual-property-conference>

from the late 1970s through the mid-1980s, Dr. Rao worked on or managed projects relating to Texas Instruments' 64kb RAM, 256Kb RAM, 1Mb RAM, 4 Mb RAM, EEPROM, SRAM, and microcontrollers. For that work, Dr. Rao received numerous additional U.S. Patents.

30. The USPTO was not the only organization to recognize Dr. Rao's achievements. Some of Dr. Rao's work at Texas Instruments was so remarkable that it has been credited in multiple exhibits in the National Museum of American History at the Smithsonian Institution.⁸ For example, the Smithsonian has displayed Texas Instruments' experimental 1-megabit CMOS DRAM, produced in April 1985 under Dr. Rao's leadership, and credited Dr. Rao for the achievement.⁹



31. In 1994, Dr. Rao left Texas Instruments for Cirrus Logic. During his two-year

⁸ <http://smithsonianchips.si.edu/texas/wafer.htm>

⁹ http://smithsonianchips.si.edu/texas/t_360.htm

tenure at Cirrus Logic, he received more U.S. Patents relating to his work on integrated graphics controllers and memory.

32. In 1996, Dr. Rao started a company called Silicon Aquarius. Through a relationship between Silicon Aquarius and Matsushita, Dr. Rao led a design team in working on a 256Mb DRAM chip. After Silicon Aquarius ceased operations, Dr. Rao did consulting work for a number of different consulting companies and devoted much of his free time to thinking about various challenges and problems with which the semiconductor industry had struggled for years.

33. In 2003, Dr. Rao and Philip John founded Greenthread to continue Dr. Rao's pioneering work. A focal point of Dr. Rao's research was poor refresh time and the related problem of how to deal with and control the movement of both wanted and unwanted carriers in semiconductor devices, including memory and logic devices. Dr. Rao realized that graded dopants could be used to create a "drift layer" and other structures to facilitate the movement—in an upward or downward direction, as appropriate—of carriers from the semiconductor surfaces down into the substrate and vice versa. It was Dr. Rao's work on this problem that culminated in the Greenthread Patents.

WESTERN DIGITAL'S INFRINGEMENT

34. Western Digital has directly infringed, and continues to infringe, one or more claims of each of the Greenthread Patents through making, using, offering to sell, selling within the United States, and/or importing into the United States semiconductor products that practice the claimed inventions (*i.e.*, the Western Digital Accused Products).

35. Western Digital has designed memory storage devices, including SSDs embedded into external storage products and removable flash-based products.

36. As shown in Exhibit 8, the exemplary SanDisk 15nm 16 GB NAND flash memory

device meets each and every element of at least one claim of the Greenthread Patents.

37. Upon information and belief, Defendants designed and fabricated semiconductor devices using similar designs according to a limited number of processes, many of which utilize substantially similar process steps, including process steps for creating regions with graded dopant concentrations. Upon information and belief, the Western Digital devices are in relevant part substantially similar to the exemplary SanDisk 15nm 16 GB NAND flash memory device shown in Exhibit 8, particularly with regard to the manner in which the exemplary SanDisk 15 nm 16 GB NAND flash memory includes and utilizes regions with graded dopant concentrations. Exhibit 8 is thus illustrative of the manner in which the Western Digital Accused Products meet the claim limitations of the Greenthread Patents.

38. Western Digital's infringement is willful. On August 14, 2015, Western Digital's attorney Soji John was informed via email of the Greenthread Patents. After April 29, 2022, upon information and belief, Western Digital was again informed of its infringement in connection with allegations Greenthread made against Dell Inc., Dell Technologies Inc., ("Dell") and Intel Corporation ("Intel") relating to Dell's incorporation of Western Digital Accused Products into Dell products in *Greenthread, LLC v. Intel Corp. et al.*, Case No. 6:22-cv-00105-ADA (W.D. Tex). *See* Dkt. 38 (Greenthread's First Amended Complaint for Patent Infringement); and Dkt. 38-11 (Exhibit 11 to Greenthread's First Amended Complaint for Patent Infringement, including Greenthread's preliminary infringement contentions relating to Dell's incorporation or sale of infringing Western Digital products).

39. Western Digital was again informed of its infringement when it was served with a third party subpoena in the referenced matter in December 2023, which included Greenthread's infringement contentions as an exhibit. Upon information and belief, Western Digital was further

informed of its infringement in Greenthread's Second Amended Complaint, filed on January 23, 2023. *See* Dkt. 120-8 at 168-226 (Greenthread's amended infringement contentions relating to Dell's incorporation or sale of infringing Western Digital products). Western Digital learned of Greenthread's allegations against Intel and Dell concerning Western Digital Accused Products at least through Greenthread's subpoena and, on information and belief, from Intel and Dell and/or through monitoring of patent infringement actions.¹⁰

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 8,421,195

40. Greenthread incorporates by reference and re-alleges all of the foregoing paragraphs of this Complaint and exhibits attached hereto as if fully set forth herein.

41. The following allegations are based on publicly available information and a reasonable investigation of the structure and operation of the Western Digital Accused Products.

¹⁰ Multiple courts have upheld Greenthread's construction of the Greenthread Patents in related matters. In *Greenthread, LLC v. Samsung Electronics Co., Ltd. et al.*, Case No. 2:19-cv-00147-JRG (E.D. Tex.), the Eastern District of Texas Court adopted Greenthread's claim construction. *See* Dkt. 67. In *Greenthread, LLC v. Intel Corp., et al.*, Case No. 6:22-cv-00105-ADA (W.D. Tex), the Western District of Texas similarly issued a preliminary claim construction order adopting Greenthread's construction. *See* Dkt. 36-21 in *Greenthread, LLC v. Intel Corp.*, Case No. 3:22-cv-02001-JR (attaching as an exhibit the Western District of Texas's preliminary claim construction order in a status update before the District of Oregon). The claims in this matter against Intel were ultimately severed and transferred to Oregon, and the District of Oregon adopted the Western District of Texas' preliminary claim construction. *See* Dkt. 44 ("The Court also finds that the WDTX's preliminary constructions and summary judgment rulings are neither legally incorrect nor factually distinguishable. As a result, the Court adopts the WDTX's preliminary constructions and summary judgment rulings as its own. . ."). The Western District of Texas also denied Defendants' motions to dismiss and for summary judgment on similar grounds. *See* Dkt. 36-22 in *Greenthread, LLC v. Intel Corp.*, Case no. 3:22-cv-02001-JR (attaching as an exhibit the Western District of Texas' denial of Defendants' motion for summary judgment); Dkt. 110 in *Greenthread LLC v. Intel Corp.*, Case No. 6:22-cv-00105-ADA (W.D. Tex). The District of Oregon similarly adopted these rulings. *See* Dkt. 44 in *Greenthread, LLC v. Intel Corp.*, Case no. 3:22-cv-02001-JR.

Greenthread reserves the right to modify this description, including, for example, on the basis of information about the Western Digital Accused Products that it obtains during discovery.

42. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

43. As alleged above and in Exhibit 8, the products analyzed in Exhibit 8 meet each and every one of the claim limitations of at least one claim of the '195 patent.

44. As alleged above, the products analyzed in Exhibit 8 are exemplary of the Western Digital Accused Products.

45. As alleged above, Defendants have and continue to infringe at least one claim of the '195 patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Western Digital Accused Products. As alleged above, Defendants have and continue to infringe at least one claim of the '195 patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Western Digital Accused Products.

46. Defendants' continued infringement is willful

47. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 9,190,502

48. Greenthread incorporates by reference and re-alleges all of the foregoing paragraphs of this Complaint and exhibits attached hereto as if fully set forth herein.

49. The following allegations are based on publicly available information and a reasonable investigation of the structure and operation of the Western Digital Accused Products.

Greenthread reserves the right to modify this description, including, for example, on the basis of information about the Western Digital Accused Products that it obtains during discovery.

50. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

51. As alleged above and in Exhibit 8, the products analyzed in Exhibit 8 meet each and every one of the claim limitations of at least one claim of the '502 patent.

52. As alleged above, the products analyzed in Exhibit 8 are exemplary of the Western Digital Accused Products.

53. As alleged above, Defendants have and continue to infringe at least one claim of the '502 patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Western Digital Accused Products.

54. Defendants' infringement is willful.

55. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 10,510,842

56. Greenthread incorporates by reference and re-alleges all of the foregoing paragraphs of this Complaint and exhibits attached hereto as if fully set forth herein.

57. The following allegations are based on publicly available information and a reasonable investigation of the structure and operation of the Western Digital Accused Products. Greenthread reserves the right to modify this description, including, for example, on the basis of information about the Western Digital Accused Products that it obtains during discovery.

58. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

59. As alleged above and in Exhibits 8, the products analyzed in Exhibit 8 meet each and every one of the claim limitations of at least one claim of the '842 patent.

60. As alleged above, the products analyzed in Exhibit 8 are exemplary of the Western Digital Accused Products.

61. As alleged above, Defendants have and continue to infringe at least one claim of the '842 patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Western Digital Accused Products.

62. Defendants' infringement is willful.

63. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. 10,734,481

64. Greenthread incorporates by reference and re-alleges all of the foregoing paragraphs of this Complaint and exhibits attached hereto as if fully set forth herein.

65. The following allegations are based on publicly available information and a reasonable investigation of the structure and operation of the Western Digital Accused Products. Greenthread reserves the right to modify this description, including, for example, on the basis of information about the Western Digital Accused Products that it obtains during discovery.

66. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

67. As alleged above and in Exhibits 8, the products analyzed in Exhibit 8 meet each and every one of the claim limitations of at least one claim of the '841 patent.

68. As alleged above, the products analyzed in Exhibit 8 are exemplary of the Western Digital Accused Products.

69. As alleged above, Defendants have and continue to infringe at least one claim of the '841 patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Western Digital Accused Products.

70. Defendants' infringement is willful.

71. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

COUNT V: INFRINGEMENT OF U.S. PATENT NO. 11,121,222

72. Greenthread incorporates by reference and re-alleges all of the foregoing paragraphs of this Complaint and exhibits attached hereto as if fully set forth herein.

73. The following allegations are based on publicly available information and a reasonable investigation of the structure and operation of the Western Digital Accused Products. Greenthread reserves the right to modify this description, including, for example, on the basis of information about the Western Digital Accused Products that it obtains during discovery.

74. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

75. As alleged above and in Exhibit 8, the products analyzed in Exhibit 8 meet each and every one of the claim limitations of at least one claim of the '222 patent.

76. As alleged above, the products analyzed in Exhibit 8 are exemplary of the Western Digital Accused Products.

77. As alleged above, Defendants have and continue to infringe at least one claim of the '222 patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Western Digital Accused Products.

78. Defendants' infringement is willful.

79. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

COUNT VI: INFRINGEMENT OF U.S. PATENT NO. 11,316,014

80. Greenthread incorporates by reference and re-alleges all of the foregoing paragraphs of this Complaint and exhibits attached hereto as if fully set forth herein.

81. The following allegations are based on publicly available information and a reasonable investigation of the structure and operation of the Western Digital Accused Products. Greenthread reserves the right to modify this description, including, for example, on the basis of information about the Western Digital Accused Products that it obtains during discovery.

82. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

83. As alleged above and in Exhibits 8, the products analyzed in Exhibit 8 meet each and every one of the claim limitations of at least one claim of the '014 patent.

84. As alleged above, the products analyzed in Exhibit 8 are exemplary of the Western Digital Accused Products.

85. As alleged above, Defendants have and continue to infringe at least one claim of the '014 patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Western Digital Accused Products.

86. Defendants' infringement is willful.

87. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

DAMAGES

88. As a result of Defendants' acts of infringement, Greenthread has suffered and

continues to suffer actual and consequential damages. However, Greenthread does not yet know the full extent of the infringement and the amount of damages cannot be ascertained except through discovery and special accounting. To the fullest extent permitted by law, Greenthread seeks recovery of damages at least for reasonable royalties, unjust enrichment, and benefits received by Defendants as a result of using the patented technology. Greenthread further seeks any other damages to which Greenthread is entitled under law or in equity, including enhanced damages for Western Digital's willful infringement.

DEMAND FOR JURY TRIAL

89. Greenthread hereby demands a jury trial for all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Greenthread respectfully requests that this Court enter judgment in its favor as follows:

A. That Judgment be entered that Defendants have infringed one or more claims of the Greenthread Patents, literally and under the doctrine of equivalents;

B. That, in accordance with 35 U.S.C. § 283, Defendants and all its affiliates, employees, agents, officers, directors, attorneys, successors, and assigns and all those acting on behalf of or in active concert or participation with any of them, be preliminarily and permanently enjoined from (1) infringing the Greenthread Patents and (2) making, using, selling, and offering for sale, or importing into the United States, the Western Digital Accused Products;

C. An award of damages sufficient to compensate Greenthread for Defendants' infringement under 35 U.S.C. § 284;

D. That the case be found exceptional under 35 U.S.C. § 285 and that Greenthread be awarded its reasonable attorneys' fees;

- E. Costs and expenses in this action;
- F. Damages for pre-issuance infringement under 154(d);
- G. An award of prejudgment and post-judgment interest; and

Such other and further relief as the Court may deem just and proper.

Dated: March 24, 2023

FARNAN LLP

/s/ Brian E. Farnan

Brian E. Farnan (Bar No. 4089)
Michael J. Farnan (Bar No. 5165)
919 North Market St., 12th Floor
Wilmington, DE 19801
Telephone: 302-777-0300
Facsimile: 302-777-0301
bfarnan@farnanlaw.com
mfarnan@farnanlaw.com

OF COUNSEL:

MCKOOL SMITH, PC

Alan L. Whitehurst
Nicholas T. Matich
Arvind Jairam
1999 K Street NW
Washington, DC 20006
awhitehurst@mckoolsmith.com
nmatich@mckoolsmith.com
ajairam@mckoolsmith.com

John B. Campbell
303 Colorado Street, Suite 2100
Austin, Texas 78701
jcampbell@mckoolsmith.com

Neil Ozarkar
Kaitlyn M. Dawson
600 Travis Street, Suite 7000
Houston, Texas 77002
kdawson@mckoolsmith.com

Emily Tate
One Manhattan West
395 9th Avenue, 50th Floor
New York, NY 10001
etate@mckoolsmith.com