

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

Anvik Corporation,

Plaintiff,

v.

**Samsung Electronics Co., Ltd.,
Samsung Electronics America, Inc.,
Samsung SDI Co., Ltd., and
Samsung SDI America, Inc.,**

Defendants.

**CIVIL ACTION No. 07-CV-0818-SCR-
LMS**

FIRST AMENDED COMPLAINT

Plaintiff Anvik Corporation ("Anvik"), by and through its undersigned counsel, for its First Amended Complaint against defendants Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., Samsung SDI Co., Ltd. and Samsung SDI America, Inc. (collectively, "Samsung" or "defendants"), alleges the following upon information and belief, except as to those allegations concerning Anvik, which are alleged upon knowledge.

NATURE OF THE ACTION

1. This is an action for patent infringement under the patent laws of the United States, 35 U.S.C. § 1 *et. seq.* In short, this action concerns Samsung's ongoing violations of U.S. patent laws by importing and selling, directly and/or through intermediaries, into the United

States hundreds of millions, if not billions, of dollars annually of flat-panel displays made using Anvik's patented technologies.

2. The patents-in-suit in this action relate to scanning microlithography systems and the methods performed by such systems. Scanning microlithography systems are critical in the production of a variety of microelectronic devices, including flat-panel displays, semiconductor integrated circuit chips, and other high-performance electronic products. As an example, scanning microlithography systems and the methods performed thereby are used by many of the world's largest electronics manufacturers to make thin-film transistor liquid crystal display ("LCD") panels that are incorporated into and have revolutionized televisions, computer monitors, cellular phones, video recorders and the like. The LCD panel industry generates revenue of approximately \$69 billion annually.

3. Anvik, the owner of the patents-in-suit, is a Westchester, New York-based company that designs, develops, manufactures and sells scanning microlithography systems. Anvik's patented scanning microlithography systems are based on several significant breakthroughs Anvik has made in optical systems, lithography, and microelectronics process technologies. These innovations have enabled Anvik's patented systems to achieve the high throughput levels and low cost-of-ownership demanded by the microelectronics, optoelectronics, and microsystems industries.

4. Anvik's President and founder, Dr. Kanti Jain, is a named inventor on each of the patents-in-suit. He is also Professor of Electrical and Computer Engineering and Director of the Photonics, Microelectronics, and Microsystems Laboratory at the University of Illinois at

Urbana-Champaign. As a result of his more than 30 years of contributions in the advancement of optical imaging and microelectronics manufacturing technologies, Dr. Jain is an internationally recognized scientist and technologist. He is widely recognized for his pioneering development of excimer laser lithography, for which he received two Outstanding Innovation Awards from I.B.M., and which is now used worldwide in semiconductor chip and flat-panel display manufacturing. Dr. Jain holds 50 issued patents in microlithography systems and optics, has applications for 10 additional patents pending, has published 55 papers, and has written the book *Excimer Laser Lithography*, published by the International Society for Optical Engineering ("SPIE") in 1990. He is a Fellow of the Optical Society of America, a Fellow of the Institute of Electrical and Electronics Engineers, and a Fellow and former Member of the Board of Directors and Executive Committee of SPIE.

5. Samsung, a large consumer electronics and telecommunications equipment company, is the world's largest maker of LCD panels, measured both in units and revenue. In 2005, Samsung sold a total of 43.5 million large (10-inch or larger) LCD panels, a large percentage of which were sold into the United States. Samsung's LCD segment had revenue of USD \$9.28 billion in 2005.

6. In addition to LCD panels, Samsung manufactures and sells other types of flat-panel displays, including but not limited to, plasma display panels ("PDPs") and super twisted nematic liquid crystal display panels ("STN LCDs"). LCDs, PDPs and STN LCDs are referred to herein collectively as flat-panel displays.

7. Samsung sells its flat-panel displays into the United States both directly, e.g., as components in televisions sold under its own brand name, and indirectly, e.g., as components of televisions sold by third parties, including but not limited to, Sony, Panasonic (Matsushita Electric Industrial), JVC and Sanyo.

8. Samsung's ability to meet the growing demand for flat-panel televisions and other products incorporating flat-panel displays is due in large part to its misappropriation of Anvik's patented technologies. Samsung manufactures many or all of its flat-panel displays using methods performed by scanning microlithography systems manufactured by Nikon Corp. ("Nikon"), a large Japanese company. Those Nikon machines are designated by Nikon as FX-Series scanners. The methods performed by Samsung using those FX-Series scanners violate Anvik's patents-in-suit. Neither Samsung nor Nikon is authorized to use the technology covered by Anvik's patents. Accordingly, Samsung's importation and sale of flat-panel displays manufactured using methods performed by the Nikon FX-Series scanners is an ongoing violation of Anvik's patents-in-suit.

9. In addition, the importation and sale into the United States by Samsung's customers of products which incorporate flat-panel displays purchased from Samsung manufactured using methods performed by the Nikon FX-Series scanners is an ongoing violation of Anvik's patents-in-suit. Samsung works in concert with its customers to import and sell into the United States infringing flat-panel displays (and/or products with infringing flat-panel displays incorporated therein). Samsung has knowledge of Anvik's patents and possesses a specific intent to encourage direct infringement of Anvik's patents by Samsung's customers.

10. Although Samsung itself produces a large volume of flat-panel displays for use in its televisions and other products, as well as in televisions and other products of third parties, Samsung is unable to produce as many flat-panel displays as it needs. Samsung therefore buys large quantities of flat-panel displays from other manufacturers, including AU Optronics Corporation (a Taiwanese company), Chi Mei Optoelectronics (a Taiwanese company), and Chunghwa Picture Tubes (a Taiwanese company). Samsung incorporates these flat-panel displays into its televisions and other products that it imports and/or sells into the United States. AU Optronics Corporation, Chi Mei Optoelectronics, and Chunghwa Picture Tubes all use Nikon FX-Series scanners and the methods performed by these Nikon scanners to manufacture flat-panel displays that they sell to Samsung. None of these entities is authorized to use the technologies covered by Anvik's patents-in-suit. Samsung's importation and sale into the United States of its products incorporating these flat-panel displays bought by Samsung from other manufacturers violate the patents-in-suit.

11. Accordingly, Samsung is importing and selling into the United States, directly or through intermediaries, hundreds of millions of dollars annually of flat-panel displays in violation of Anvik's patents-in-suit.

12. As a result of Samsung's infringement of Anvik's patents, Anvik's business has been irreparably damaged and is being harmed on a continuing basis. Anvik has suffered damages in the hundreds of millions, if not billions, of dollars.

THE PARTIES

13. Anvik is a New York corporation with a principal place of business at 6 Skyline Drive, Hawthorne, New York 10532.

14. Samsung Electronics Co., Ltd. ("Samsung Korea") is a Korean corporation having its head office at 250, Taepyeongo 2-ga, Jung-gu, Seoul 100-742 Korea.

15. Samsung Electronics America, Inc. ("Samsung America") is a New York corporation having its principal place of business at 105 Challenger Road, Ridgefield Park, NJ 07660. Samsung America provides sales and service of Samsung Korea's products in the United States.

16. Samsung SDI Co., Ltd. ("Samsung SDI Korea") is a Korean corporation having its head office at 15~18th floor Samsung Life Insurance Bldg., 150 Taepyungro 2-ga, Jung-gu, Seoul.

17. Samsung SDI America, Inc. ("Samsung SDI America") is a California corporation having its principal place of business at 3333 Michelson Drive, Suite 700, Irvine, CA 92612. Samsung SDI America provides sales and service of Samsung SDI Korea's products in the United States. Samsung Korea, Samsung America, Samsung SDI Korea and Samsung SDI America are collectively referred to herein as Samsung.

JURISDICTION AND VENUE

18. This Court has jurisdiction over the subject matter of the claims asserted herein pursuant to 28 U.S.C. §§ 1331 and 1338.

19. Venue is proper in this judicial district under 28 U.S.C. §§ 1391(b) and (c) because a substantial part of the events giving rise to the claims occurred in this district, Samsung may be found in this judicial district, and Samsung is subject to personal jurisdiction in this judicial district. Venue is also proper in this judicial district under 28 U.S.C. § 1400(b).

20. Samsung, both directly and through one or more intermediaries, and as an intermediary, is doing business within this State and judicial district, transacts business with this State and judicial district, derives substantial revenue from intra-state and inter-state commerce, has committed acts of patent infringement within this State and judicial district, and is otherwise within the jurisdiction of this Court. Samsung manufactures flat-panel displays in Korea and directs those products to the United States, including this judicial district, directly and/or through established distribution channels involving one or more third parties, knowing that these third parties will use their respective nationwide contacts and distribution channels to import into, sell, offer for sale and/or use these products in this judicial district and elsewhere in the United States.

COUNT I - Infringement of U.S. Patent No. 4,924,257

21. Anvik repeats and realleges the allegations set forth above.

22. This claim arises under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*, including 35 U.S.C. § 271, and is for willful patent infringement.

23. United States Patent No. 4,924,257 ("the '257 patent"), entitled "Scan and Repeat High Resolution Projection Lithography System," was duly and legally issued by the United States Patent and Trademark Office on May 8, 1990. A copy of the '257 Patent is attached hereto as Exhibit A.

24. Anvik is the assignee of all rights, title, and interest in and to the '257 patent and possesses all rights of recovery under the '257 patent.

25. Through its conduct discussed above, directly and/or through intermediaries, Samsung has infringed and is continuing to infringe the '257 patent in violation of 35 U.S.C. § 271, including but not limited to, 35 U.S.C. § 271(g).

26. Through its conduct discussed above, Samsung has also contributed to the infringement of the '257 patent, and/or induced others to infringe the '257 patent, in violation of 35 U.S.C. §§ 271(b) and/or (c).

27. As a direct and proximate result of Samsung's acts of infringement, Anvik has suffered damages and is entitled to recover an amount adequate to compensate for the infringement under 35 U.S.C. § 284, which amount is to be determined at trial.

28. Samsung has had, at all relevant times, actual and constructive notice that its conduct infringed on the claims of the '257 patent but nevertheless continued its infringing conduct. Samsung's infringement has been, and continues to be, willful and, therefore, Anvik is entitled to treble damages under 35 U.S.C. § 284.

29. This is an exceptional case under 35 U.S.C. § 285 which entitles Anvik to an award of reasonable attorneys' fees.

30. Samsung will continue infringing the '257 patent, causing irreparable harm for which there is no adequate remedy at law, unless enjoined from further infringement by this Court.

COUNT II - Infringement of U.S. Patent No. 5,285,236

31. Anvik repeats and re-alleges the allegations set forth above.

32. This claim arises under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*, including 35 U.S.C. § 271, and is for willful patent infringement.

33. United States Patent No. 5,285,236 ("the '236 patent"), entitled "Large-Area, High-Throughput, High-Resolution Projection Imaging System," was duly and legally issued by the United States Patent and Trademark Office on February 8, 1994. A copy of the '236 patent is attached hereto as Exhibit B.

34. Anvik is the assignee of all rights, title, and interest in and to the '236 patent and possesses all rights of recovery under the '236 patent.

35. Through its conduct discussed above, directly and/or through intermediaries, Samsung has infringed and is continuing to infringe the '236 patent in violation of 35 U.S.C. § 271, including but not limited to, 35 U.S.C. § 271(g).

36. Through its conduct discussed above, Samsung has also contributed to the infringement of the '236 patent, and/or induced others to infringe the '236 patent, in violation of 35 U.S.C. §§ 271(b) and/or (c).

37. As a direct and proximate result of Samsung's acts of infringement, Anvik has suffered damages and is entitled to recover an amount adequate to compensate for the infringement under 35 U.S.C. § 284, which amount is to be determined at trial.

38. Samsung has had, at all relevant times, actual and constructive notice that its conduct infringed on the claims of the '236 patent but nevertheless continued its infringing

conduct. Samsung's infringement has been, and continues to be, willful and, therefore, Anvik is entitled to treble damages under 35 U.S.C. § 284.

39. This is an exceptional case under 35 U.S.C. § 285 which entitles Anvik to an award of reasonable attorneys' fees.

40. Samsung will continue infringing the '236 patent, causing irreparable harm for which there is no adequate remedy at law, unless enjoined from further infringement by this Court.

COUNT III - Infringement of U.S. Patent No. 5,291,240

41. Anvik repeats and re-alleges the allegations set forth above.

42. This claim arises under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*, including 35 U.S.C. § 271, and is for willful patent infringement.

43. United States Patent No. 5,291,240 ("the '240 patent"), entitled "Nonlinearity-Compensated Large-Area Patterning System," was duly and legally issued by the United States Patent and Trademark Office on March 1, 1994. A copy of the '240 patent is attached hereto as Exhibit C.

44. Anvik is the assignee of all rights, title, and interest in and to the '240 patent and possesses all rights of recovery under the '240 patent.

45. Through its conduct discussed above, directly and/or through intermediaries, Samsung has infringed and is continuing to infringe the '240 patent in violation of 35 U.S.C. § 271, including but not limited to, 35 U.S.C. § 271(g).

46. Through its conduct discussed above, Samsung has also contributed to the infringement of the '240 patent, and/or induced others to infringe the '240 patent, in violation of 35 U.S.C. §§ 271(b) and/or (c).

47. As a direct and proximate result of Samsung's acts of infringement, Anvik has suffered damages and is entitled to recover an amount adequate to compensate for the infringement under 35 U.S.C. § 284, which amount is to be determined at trial.

48. Samsung has had, at all relevant times, actual and constructive notice that its conduct infringed on the claims of the '240 patent but nevertheless continued its infringing conduct. Samsung's infringement has been, and continues to be, willful and, therefore, Anvik is entitled to treble damages under 35 U.S.C. § 284.

49. This is an exceptional case under 35 U.S.C. § 285 which entitles Anvik to an award of reasonable attorneys' fees.

50. Samsung will continue infringing the '240 patent, causing irreparable harm for which there is no adequate remedy at law, unless enjoined from further infringement by this Court.

COUNT IV - Infringement of U.S. Patent No. 5,721,606

51. Anvik repeats and re-alleges the allegations set forth above.

52. This claim arises under the Patent Laws of the United States, 35 U.S.C. § 1 *et. seq.*, including 35 U.S.C. § 271, and is for willful patent infringement.

53. United States Patent No. 5,721,606 ("the '606 patent"), entitled "Large-Area, High-Throughput, High-Resolution, Scan-and-Repeat, Projection Patterning System Employing

Sub-Full Mask," was duly and legally issued by the United States Patent and Trademark Office on February 24, 1998. A copy of the '606 patent is attached hereto as Exhibit D.

54. Anvik is the assignee of all rights, title, and interest in and to the '606 patent and possesses all rights of recovery under the '606 patent.

55. Through its conduct discussed above, directly and/or through intermediaries, Samsung has infringed and is continuing to infringe the '606 patent in violation of 35 U.S.C. § 271, including but not limited to, 35 U.S.C. § 271(g).

56. Through its conduct discussed above, Samsung has also contributed to the infringement of the '606 patent, and/or induced others to infringe the '606 patent, in violation of 35 U.S.C. §§ 271(b) and/or (c).

57. As a direct and proximate result of Samsung's acts of infringement, Anvik has suffered damages and is entitled to recover an amount adequate to compensate for the infringement under 35 U.S.C. § 284, which amount is to be determined at trial.

58. Samsung has had, at all relevant times, actual and constructive notice that its conduct infringed on the claims of the '606 patent but nevertheless continued its infringing conduct. Samsung's infringement has been, and continues to be, willful and, therefore, Anvik is entitled to treble damages under 35 U.S.C. § 284.

59. This is an exceptional case under 35 U.S.C. § 285 which entitles Anvik to an award of reasonable attorneys' fees.

60. Samsung will continue infringing the '606 patent, causing irreparable harm for which there is no adequate remedy at law, unless enjoined from further infringement by this Court.

COUNT V - Infringement of U.S. Patent No. 5,897,986

61. Anvik repeats and re-alleges the allegations set forth above.

62. This claim arises under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*, including 35 U.S.C. § 271, and is for willful patent infringement.

63. United States Patent No. 5,897,986 ("the '986 patent"), entitled "Projection Patterning of Large Substrates Using Limited-Travel X-Y Stage," was duly and legally issued by the United States Patent and Trademark Office on April 27, 1999. A copy of the '986 patent is attached hereto as Exhibit E.

64. Anvik is the assignee of all rights, title, and interest in and to the '986 patent and possesses all rights of recovery under the '986 patent.

65. Through its conduct discussed above, directly and/or through intermediaries, Samsung has infringed and is continuing to infringe the '986 patent in violation of 35 U.S.C. § 271, including but not limited to, 35 U.S.C. § 271(g).

66. Through its conduct discussed above, Samsung has also contributed to the infringement of the '986 patent, and/or induced others to infringe the '986 patent, in violation of 35 U.S.C. §§ 271(b) and/or (c).

67. As a direct and proximate result of Samsung's acts of infringement, Anvik has suffered damages and is entitled to recover an amount adequate to compensate for the infringement under 35 U.S.C. § 284, which amount is to be determined at trial.

68. Samsung has had, at all relevant times, actual and constructive notice that its conduct infringed on the claims of the '986 patent but nevertheless continued its infringing conduct. Samsung's infringement has been, and continues to be, willful and, therefore, Anvik is entitled to treble damages under 35 U.S.C. § 284.

69. This is an exceptional case under 35 U.S.C. § 285 which entitles Anvik to an award of reasonable attorneys' fees.

70. Samsung will continue infringing the '986 patent, causing irreparable harm for which there is no adequate remedy at law, unless enjoined from further infringement by this Court.

PRAYER FOR RELIEF

WHEREFORE, Anvik prays for judgment and relief as follows:

A. A judgment that Samsung has infringed and continues to infringe claims of the '257, '236, '240, '606 and '986 patents;

B. An order, pursuant to 35 U.S.C. § 283, permanently enjoining and restraining Samsung and its officers, directors, principals, agents, servants, employees, successors and assigns, and all those in active concert or participation with each of the foregoing, from infringing – and from contributing to and/or inducing the infringement of – any claims of the '257, '236, '240, '606 and '986 patents;

C. An order, pursuant to 35 U.S.C. § 284, that Samsung account to Anvik for an amount adequate to compensate Anvik for damages sustained from Samsung's infringing acts, which amount is to be determined, and that said amount be trebled pursuant to 35 U.S.C. § 284;

D. An order, pursuant to 35 U.S.C. § 285, that Samsung pay Anvik its reasonable attorneys' fees in connection with this action;

E. A judgment that costs of this action be awarded to Anvik;

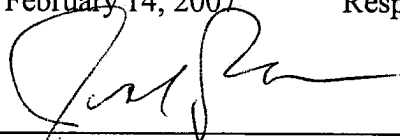
F. An order that Samsung pay Anvik prejudgment and post-judgment interest at the highest statutory rate on Anvik's damages, costs and attorneys' fees; and

G. An order awarding Anvik such other and further relief as may be deemed by this Court to be just and proper.

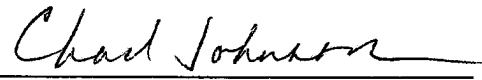
JURY DEMAND

Anvik hereby demands trial by jury on all issues so triable.

Date: February 14, 2007 Respectfully submitted,

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