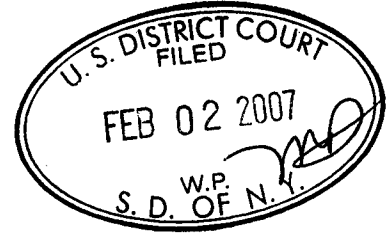


UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK



Anvik Corporation,

Plaintiff,

v.

Sharp Corporation and  
Sharp Electronics Corporation,

Defendants.

CIVIL ACTION No. \_\_\_\_\_

'07 CIV 0825

**COMPLAINT**

Plaintiff Anvik Corporation ("Anvik"), by and through its undersigned counsel, for its Complaint against defendants Sharp Corporation and Sharp Electronics Corporation (collectively, "Sharp" 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 Sharp's ongoing violations of U.S. patent laws by importing and selling 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. Sharp develops, produces, and markets advanced consumer electronics, business products, and electronic components in the United States and elsewhere. Sharp is a major producer of integrated circuits, digital copiers, fax machines, and household appliances, and has emerged as a leader of the LCD panel industry. Sharp’s annual sales of LCD panels total approximately \$5.25 billion, a large percentage of which results from imports and sales in the United States.

6. Sharp is a leading manufacturer of large LCD televisions sold in the United States. Sharp sold approximately 4 million LCD televisions in fiscal year 2005 and 6 million in fiscal year 2006 and recently said that it expects to sell 9 million in fiscal year 2007. A high percentage of these Sharp LCD televisions are imported and sold in the United States. To meet the growing demand for large LCD televisions, Sharp recently began to operate a second production line at its Kameyama Plant No. 2 in order to expand its production capacity to 30,000 substrates per month, double its previous capacity of 15,000 substrates per month. (A substrate is a panel of glass or other material that is processed to make one or more flat-panel displays.)

7. Sharp sells its LCD panels into the United States both directly, e.g., as components in televisions sold under its own AQUOS brand name, and indirectly, e.g., as components of televisions sold by third parties, including but not limited to, Sony.

8. Sharp's ability to meet the growing demand for LCD televisions and other products incorporating LCD panels is due in large part to its misappropriation of Anvik's patented technologies. Sharp manufactures many or all of its LCD panels 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 Sharp using those FX-Series scanners violate Anvik's patents-in-suit. Neither Sharp nor Nikon is authorized to use the technology covered by Anvik's patents. Accordingly, Sharp's importation and sale of LCD panels manufactured using methods performed by the Nikon FX-Series scanners is an ongoing violation of Anvik's patents-in-suit. Sharp is importing and selling into the United States, directly or through intermediaries, hundreds of millions of dollars annually of LCDs and other flat-panel displays in violation of Anvik's patents-in-suit.

9. In addition, the importation and sale into the United States by Sharp's customers of products which incorporate LCD panels purchased from Sharp manufactured using methods performed by the Nikon FX-Series scanners is an ongoing violation of Anvik's patents-in-suit. Sharp works in concert with its customers to import and sell into the United States infringing LCD panels (and/or products with infringing LCD panels incorporated therein). Sharp has

knowledge of Anvik's patents and possesses a specific intent to encourage direct infringement of Anvik's patents by Sharp's customers.

10. Although Sharp itself produces a large volume of LCD panels for use in its televisions and other products, Sharp is unable to produce as many LCD panels as it needs for its televisions and other products incorporating such displays. Sharp therefore buys large quantities of LCD panels from other manufacturers, including AU Optronics Corporation (a Taiwanese company), Chi Mei Optoelectronics (a Taiwanese company), Chunghwa Picture Tubes (a Taiwanese company), Quanta Display (a Taiwanese company acquired by AU Optronics Corporation in 2006), and Toppan Printing Co. (a Japanese company). Sharp incorporates these LCD panels into its televisions and other products that it imports and/or sells into the United States. AU Optronics Corporation, Chi Mei Optoelectronics, Chunghwa Picture Tubes, Quanta Display, and Toppan Printing Co. all use Nikon FX-Series scanners and the methods performed by these Nikon scanners to manufacture LCD panels that they sell to Sharp. None of these entities is authorized to use the technologies covered by Anvik's patents-in-suit. Sharp's importation and sale into the United States of its products incorporating these LCD panels bought by Sharp from other manufacturers violate the patents-in-suit.

11. As a result of Sharp'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**

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

13. Sharp Corporation ("Sharp Japan") is a Japanese corporation having its head office at 22-22 Nagaike-cho, Abeno-ku, Osaka 545-8522, Japan.

14. Sharp Electronics Corporation ("Sharp America") is a New York corporation having its principal place of business at Sharp Plaza, Mahwah, New Jersey 07430-2135. Sharp America is the U.S. sales and marketing subsidiary of Sharp Japan. Sharp Japan and Sharp America are collectively referred to herein as Sharp.

**JURISDICTION AND VENUE**

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

16. 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, Sharp may be found in this judicial district, and Sharp is subject to personal jurisdiction in this judicial district. Venue is also proper in this judicial district under 28 U.S.C. § 1400(b).

17. Sharp, 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. Sharp manufactures LCD panels in Japan 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**

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

19. 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.

20. 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.

21. 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.

22. Through its conduct discussed above, directly and/or through intermediaries, Sharp 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).

23. Through its conduct discussed above, Sharp 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).

24. As a direct and proximate result of Sharp'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.

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

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

27. Sharp 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**

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

29. 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.

30. 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.

31. 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.



32. Through its conduct discussed above, directly and/or through intermediaries, Sharp 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).

33. Through its conduct discussed above, Sharp 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).

34. As a direct and proximate result of Sharp'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.

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

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

37. Sharp 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**

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

39. 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.

40. 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.

41. 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.

42. Through its conduct discussed above, directly and/or through intermediaries, Sharp 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).

43. Through its conduct discussed above, Sharp 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).

44. As a direct and proximate result of Sharp'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.

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

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

47. Sharp 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**

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

49. 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.

50. 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.

51. 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.

52. Through its conduct discussed above, directly and/or through intermediaries, Sharp 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).

53. Through its conduct discussed above, Sharp 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).

54. As a direct and proximate result of Sharp'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.

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

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

57. Sharp 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**

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

59. 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.

60. 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.

61. 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.

62. Through its conduct discussed above, directly and/or through intermediaries, Sharp 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).

63. Through its conduct discussed above, Sharp 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).

64. As a direct and proximate result of Sharp'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.

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

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

67. Sharp 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 Sharp 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 Sharp 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 Sharp account to Anvik for an amount adequate to compensate Anvik for damages sustained from Sharp'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 Sharp 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 Sharp 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 2, 2007

Respectfully submitted,

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