

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW HAMPSHIRE

BRANDYWINE COMMUNICATIONS
TECHNOLOGIES, LLC,

Plaintiff,

v.

G4 COMMUNICATIONS CORPORATION,

Defendant.

Civil Action No. 1:13-cv-00017-LM

JURY TRIAL DEMANDED

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Brandywine Communications Technologies, LLC ("Brandywine" or "Plaintiff"), by way of this First Amended Complaint against the above-named Defendant ("G4 Communications" or "Defendant"), alleges the following:

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*

THE PARTIES

2. Plaintiff Brandywine is a limited liability company organized under the laws of the State of Delaware with a place of business at 2400 Dallas Parkway, Suite 200, Plano, Texas 75093.

3. Defendant G4 Communications is a corporation organized under the laws of the State of New Hampshire with its principal place of business at 25 South Maple Street, Manchester, New Hampshire 03103.

JURISDICTION AND VENUE

4. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

5. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338.

6. Defendant is subject to the jurisdiction of this Court because it is incorporated in this State.

7. Venue is proper in this judicial district under 28 U.S.C. §§ 1391(c) and 1400(b).

FACTUAL BACKGROUND

8. On April 27, 1993, U.S. Patent No. 5,206,854 (the "'854 Patent"), entitled "Detecting Loss of Echo Cancellation" was duly and legally issued by the United States Patent and Trademark Office to inventors William L. Betts and Robert A. Day, II (collectively the "'854 Inventors"). The '854 Patent has been duly and legally assigned to Brandywine. A copy of the '854 Patent is attached as Exhibit A.

9. On October 5, 1993, U.S. Patent No. 5,251,328 (the "'328 Patent"), entitled "Predistortion Technique for Communications Systems," was duly and legally issued by the United States Patent and Trademark Office to inventor David G. Shaw (the "'328 Inventor"). The '328 Patent and has been duly and legally assigned to Brandywine. A copy of the '328 Patent is attached as Exhibit B.

10. On September 22, 1998, U.S. Patent No. 5,812,537 (the "'537 Patent"), entitled "Echo Canceling Method and Apparatus for Data Over Cellular," was duly and legally issued by the United States Patent and Trademark Office to inventors William Lewis Betts, Ramon B. Hazen, and Robert Earl Scott (collectively the "'537 Inventors"). The '537 Patent has been duly and legally assigned to Brandywine. A copy of the '537 Patent is attached as Exhibit C.

11. On October 27, 1998, U.S. Patent No. 5,828,657 (the "'657 Patent"), entitled "Half-Duplex Echo Canceler Training Using a Pilot Signal," was duly and legally issued by the United States Patent and Trademark Office to inventors William Lewis Betts, Ramon B. Hazen, and Robert Earl Scott (collectively the "'657 Inventors"). The '657 Patent has been duly and legally assigned to Brandywine. A copy of the '657 Patent is attached as Exhibit D.

12. On November 29, 2005, U.S. Patent No. 6,970,501 (the "'501 Patent"), entitled "Method and Apparatus For Automatic Selection and Operation of a Subscriber Line Spectrum Class Technology," was duly and legally issued by the United States Patent and Trademark Office to inventors Gordon Bremer and Philip J. Kyees (collectively the "'501 Inventors"). The '501 Patent has been duly and legally assigned to Brandywine. A copy of the '501 Patent is attached as Exhibit E.

13. On February 22, 2011, U.S. Patent No. 7,894,472 (the "'472 Patent"), entitled "Method and Apparatus For Automatic Selection and Operation of a Subscriber Line Spectrum Class Technology," was duly and legally issued by the United States Patent and Trademark Office to inventors Gordon Bremer and Philip J. Kyees (collectively the "'472 Inventors"). The '472 Patent has been duly and legally assigned to Brandywine. A copy of the '472 Patent is attached as Exhibit F.

14. On December 10, 2012, Brandywine sent a letter to Defendant notifying Defendant that it has been infringing the '854, '328, '537, '657, '501, and '472 Patents through the operation of its Digital Subscriber Line ("DSL") business. Defendant has received the letter.

**FIRST CLAIM FOR RELIEF
INFRINGEMENT OF U.S. PATENT NO. 5,206,854
(35 U.S.C. § 271)**

15. The allegations set forth in the foregoing paragraphs 1 through 14 are hereby realleged and incorporated herein by reference.

16. Upon information and belief, Defendant has infringed one or more claims of the '854 Patent in this judicial district and elsewhere by making, using, selling, and/or offering for sale services and products that infringe and/or perform processes that infringe one or more claims of the '854 Patent ("Accused Services and Products for the '854 Patent").

17. Upon information and belief, Defendant's Accused Services and Products for the '854 Patent include but are not limited to Defendant's DSL service and equipment. Upon information and belief, Defendant uses xDSL technology to deliver data access services under the trade names Xconnect, FastReach, ExtendedReach, and MetroReach. Upon information and belief, Defendant distributes customer-end DSL equipment such as Zyxel P660R-D1 and Comtrend CT-5071T. Upon information and belief, Defendants also operates network-end DSL equipment such as Actelis ML698. These products and services infringe claims of the '854 Patent, for example claim 1.

18. Defendant had actual knowledge of the '854 Patent and its alleged infringement of that patent since at least the time it received Brandywine's December 10, 2012 notice of infringement letter.

19. Because of Defendant's infringement of the '854 Patent, Brandywine has suffered damages.

**SECOND CLAIM FOR RELIEF
INFRINGEMENT OF U.S. PATENT NO. 5,251,328
(35 U.S.C. § 271)**

20. The allegations set forth in the foregoing paragraphs 1 through 19 are hereby realleged and incorporated herein by reference.

21. Upon information and belief, Defendant has infringed one or more claims of the '328 Patent in this judicial district and elsewhere by making, using, selling, and/or offering for sale services and products that infringe and/or perform processes that infringe one or more claims of the '328 Patent ("Accused Services and Products for the '328 Patent").

22. Upon information and belief, Defendant's Accused Services and Products for the '328 Patent include but are not limited to Defendant's DSL service and equipment. Upon information and belief, Defendant uses xDSL technology to deliver data access services under the trade names Xconnect, FastReach, ExtendedReach, and MetroReach. Upon information and belief, Defendant distributes customer-end DSL equipment such as Zyxel P660R-D1 and Comtrend CT-5071T. Upon information and belief, Defendants also operates network-end DSL equipment such as Actelis ML698. These products and services infringe claims of the '328 Patent, for example claims 2, 15, and 21.

23. Defendant had actual knowledge of the '328 Patent and its alleged infringement of that patent since at least the time it received Brandywine's December 10, 2012 notice of infringement letter.

24. Because of Defendant's infringement of the '328 Patent, Brandywine has suffered damages.

**THIRD CLAIM FOR RELIEF
INFRINGEMENT OF U.S. PATENT NO. 5,812,537
(35 U.S.C. § 271)**

25. The allegations set forth in the foregoing paragraphs 1 through 24 are hereby realleged and incorporated herein by reference.

26. Upon information and belief, Defendant has infringed and continues to infringe one or more claims of the '537 Patent in this judicial district and elsewhere by making, using, selling, and/or offering for sale services and products that infringe and/or perform processes that infringe one or more claims of the '537 Patent ("Accused Services and Products for the '537 Patent").

27. Upon information and belief, Defendant's Accused Service and Products for the '537 Patent include but are not limited to Defendant's DSL service, modems, and equipment. Upon information and belief, Defendant uses xDSL technology to deliver data access services under the trade names Xconnect, FastReach, ExtendedReach, and MetroReach. Upon information and belief, Defendant distributes customer-end DSL equipment such as Zyxel P660R-D1 and Comtrend CT-5071T. Upon information and belief, Defendants also operates network-end DSL equipment such as Actelis ML698. These products and services infringe claims of the '537 Patent, for example claims 1, 12, 15, 19, and 22.

28. Defendant had actual knowledge of the '537 Patent and its alleged infringement of that patent since at least the time it received Brandywine's December 10, 2012 notice of infringement letter.

29. Upon information and belief, since at least the time it received Brandywine's December 10, 2012 notice letter, Defendant has committed and continues to commit acts of contributory infringement of the '537 Patent under 35 U.S.C. § 271(c) by providing products,

including the Accused Services and Products to others, including but not limited to its customers and partners, knowing or willfully blind to the fact that that these products constitute a material part of the invention, were especially made or especially adapted for use in an infringement of the '537 Patent, and have no substantial non-infringing uses.

30. In particular, the Accused Services and Products include DSL modems, which constitute an especially adapted component to receive Defendant's DSL service. These modems are used by Defendant's partners and customers to perform all of the steps recited in one claim of the '537 Patent. These modems have no substantial non-infringing uses at least because they contain components whose only purpose is to practice the claimed method of providing the infringing DSL service. The use of these modems by Defendant's partners and customers constitutes direct infringement of at least one claim of the '537 Patent. Defendant has known or remained willfully blind to these facts since at least the date it received the notice letter from Brandywine notifying Defendant that such activities infringed the '537 Patent.

31. Upon information and belief, since at least the time it received Brandywine's December 10, 2012 notice letter, Defendant has induced and continues to induce others to infringe at least one claim of the '537 Patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including but not limited to Defendant's partners and customers, whose use of the Accused Services and Products constitutes direct infringement of at least one claim of the '537 Patent.

32. In particular, Defendant's actions that aid and abet others such as its partners and customers to infringe include advertising and distributing the Accused Services and Products and providing instruction materials, training, and consulting services regarding the Accused Services and Products. On information and belief, Defendant has engaged in such actions with specific

intent to cause infringement or with willful blindness to the resulting infringement because Defendant has had actual knowledge of the '537 Patent and that its acts were inducing its customers to infringe the '537 Patent since at least the date it received the notice letter from Brandywine notifying Defendant that such activities infringed the '537 Patent.

33. Despite Brandywine's notice regarding the '537 Patent, Defendant has continued to infringe the '537 Patent. On information and belief, Defendant's infringement has been and continues to be willful.

34. Brandywine has been harmed by Defendant's infringing activities.

**FOURTH CLAIM FOR RELIEF
INFRINGEMENT OF U.S. PATENT NO. 5,828,657
(35 U.S.C. § 271)**

35. The allegations set forth in the foregoing paragraphs 1 through 34 are hereby realleged and incorporated herein by reference.

36. Upon information and belief, Defendant has infringed and continues to infringe one or more claims of the '657 Patent in this judicial district and elsewhere by making, using, selling, and/or offering for sale services and products that infringe and/or perform processes that infringe one or more claims of the '657 Patent ("Accused Services and Products for the '657 Patent").

37. Upon information and belief, Defendant's Accused Services and Products for the '657 Patent include but are not limited to Defendant's DSL service, modems, and equipment. Upon information and belief, Defendant uses xDSL technology to deliver data access services under the trade names Xconnect, FastReach, ExtendedReach, and MetroReach. Upon information and belief, Defendant distributes customer-end DSL equipment such as Zyxel P660R-D1 and Comtrend CT-5071T. Upon information and belief, Defendants also operates

network-end DSL equipment such as Actelis ML698. These products and services infringe claims of the '657 Patent, for example claims 3, 4, 5, and 6.

38. Defendant had actual knowledge of the '657 Patent and its alleged infringement of that patent since at least the time it received Brandywine's December 10, 2012 notice of infringement letter.

39. Upon information and belief, since at least the time it received Brandywine's December 10, 2012 notice letter, Defendant has committed and continues to commit acts of contributory infringement of the '657 Patent under 35 U.S.C. § 271(c) by providing products, including the Accused Services and Products to others, including but not limited to its customers and partners, knowing or willfully blind to the fact that these products constitute a material part of the invention, were especially made or especially adapted for use in an infringement of the '657 Patent, and have no substantial non-infringing uses.

40. In particular, the Accused Services and Products include DSL modems, which constitute an especially adapted component to receive Defendant's DSL service. These modems are used by Defendant's partners and customers to perform all of the steps recited in one claim of the '657 Patent. These modems have no substantial non-infringing uses at least because they contain components whose only purpose is to practice the claimed method of providing the infringing DSL service. The use of these modems by Defendant's partners and customers constitutes direct infringement of at least one claim of the '657 Patent. Defendant has known or remained willfully blind to these facts since at least the date it received the notice letter from Brandywine notifying Defendant that such activities infringed the '657 Patent.

41. Upon information and belief, since at least the time it received Brandywine's December 10, 2012 notice letter, Defendant has induced and continues to induce others to

infringe at least one claim of the '657 Patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including but not limited to Defendant's partners and customers, whose use of the Accused Services and Products constitutes direct infringement of at least one claim of the '657 Patent.

42. In particular, Defendant's actions that aid and abet others such as its partners and customers to infringe include advertising and distributing the Accused Services and Products and providing instruction materials, training, and consulting services regarding the Accused Services and Products. On information and belief, Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because Defendant has had actual knowledge of the '657 Patent and that its acts were inducing its customers to infringe the '657 Patent since at least the date it received the notice letter from Brandywine notifying Defendant that such activities infringed the '657 Patent.

43. Despite Brandywine's notice regarding the '657 Patent, Defendant has continued to infringe the '657 Patent. On information and belief, Defendant's infringement has been and continues to be willful.

44. Brandywine has been harmed by Defendant's infringing activities.

**FIFTH CLAIM FOR RELIEF
INFRINGEMENT OF U.S. PATENT NO. 6,970,501
(35 U.S.C. § 271)**

45. The allegations set forth in the foregoing paragraphs 1 through 44 are hereby realleged and incorporated herein by reference.

46. Upon information and belief, Defendant has infringed and continues to infringe one or more claims of the '501 Patent in this judicial district and elsewhere by making, using, selling, and/or offering for sale services and products that infringe and/or perform processes that

infringe one or more claims of the '501 Patent ("Accused Services and Products for the '501 Patent").

47. Upon information and belief, Defendant's Accused Services and Products for the '501 Patent include but are not limited to Defendant's DSL service, modems, and equipment. Upon information and belief, Defendant uses ANSI T1.417 spectrum management classes to manage cross talk in its data centers, which provide xDSL services to many customers under the trade names Xconnect, FastReach, ExtendedReach, MetroReach. Upon information and belief, Defendant operates network-end DSL equipment such as Actelis ML698. Defendant's DSL services and equipment that provisions those services infringe claims of the '501 Patent, for example claims 1, 3, 5, 7, 8, 9, 11, and 12.

48. Defendant had actual knowledge of the '501 Patent and its alleged infringement of that patent since at least the time it received Brandywine's December 10, 2012 notice of infringement letter.

49. Upon information and belief, since at least the time it received Brandywine's December 10, 2012 notice letter, Defendant has induced and continues to induce others to infringe at least one claim of the '501 Patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including but not limited to Defendant's partners and customers, whose use of the Accused Services and Products constitutes direct infringement of at least one claim of the '501 Patent.

50. In particular, Defendant's actions that aid and abet others such as its partners and customers to infringe include advertising and distributing the Accused Services and Products and providing instruction materials, training, and consulting services regarding the Accused Services and Products. On information and belief, Defendant has engaged in such actions with specific

intent to cause infringement or with willful blindness to the resulting infringement because Defendant has had actual knowledge of the '501 Patent and that its acts were inducing its customers to infringe the '501 Patent since at least the date it received the notice letter from Brandywine notifying Defendant that such activities infringed the '501 Patent.

51. Despite Brandywine's notice regarding the '501 Patent, Defendant has continued to infringe the '501 Patent. On information and belief, Defendant's infringement has been and continues to be willful.

52. Brandywine has been harmed by Defendant's infringing activities.

**SIXTH CLAIM FOR RELIEF
INFRINGEMENT OF U.S. PATENT NO. 7,894,472
(35 U.S.C. § 271)**

53. The allegations set forth in the foregoing paragraphs 1 through 52 are hereby realleged and incorporated herein by reference.

54. Upon information and belief, Defendant has infringed and continues to infringe one or more claims of the '472 Patent in this judicial district and elsewhere by making, using, selling, and/or offering for sale services and products that infringe and/or perform processes that infringe one or more claims of the '472 Patent ("Accused Services and Products for the '472 Patent").

55. Upon information and belief, Defendant's Accused Services and Products for the '472 Patent include but are not limited to Defendant's DSL service, modems, and equipment. Upon information and belief, Defendant uses ANSI T1.417 spectrum management classes to manage cross talk in its data centers, which provide xDSL services to many customers under the trade names Xconnect, FastReach, ExtendedReach, MetroReach. Upon information and belief, Defendant operates network-end DSL equipment such as Actelis ML698. Defendant's DSL

services and equipment that provisions those services infringe claims of the '501 Patent, for example claims 1, 2, 3, 4, 6, and 7.

56. Defendant had actual knowledge of the '472 Patent and its alleged infringement of that patent since at least the time it received Brandywine's December 10, 2012 notice of infringement letter.

57. Upon information and belief, since at least the time it received Brandywine's December 10, 2012 notice letter, Defendant has induced and continues to induce others to infringe at least one claim of the '472 Patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including but not limited to Defendant's partners and customers, whose use of the Accused Services and Products constitutes direct infringement of at least one claim of the '472 Patent.

58. In particular, Defendant's actions that aid and abet others such as its partners and customers to infringe include advertising and distributing the Accused Services and Products and providing instruction materials, training, and consulting services regarding the Accused Services and Products. On information and belief, Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because Defendant has had actual knowledge of the '472 Patent and that its acts were inducing its customers to infringe the '472 Patent since at least the date it received the notice letter from Brandywine notifying Defendant that such activities infringed the '472 Patent.

59. Despite Brandywine's notice regarding the '472 Patent, Defendant has continued to infringe the '472 Patent. On information and belief, Defendant's infringement has been and continues to be willful.

60. Brandywine has been harmed by Defendant's infringing activities.

JURY DEMAND

Brandywine demands a trial by jury on all issues triable as such.

PRAYER FOR RELIEF

WHEREFORE, Brandywine respectfully requests that this Court enter judgment for Brandywine and against Defendant as follows:

- a. An adjudication that Defendant has infringed the '854, '328, '537, '657, '501, and '472 Patents;
- b. An award of damages to be paid by Defendant adequate to compensate Brandywine for Defendant's past infringement of the above Patents, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;
- c. An order that Defendant pay an ongoing royalty in an amount to be determined for any continued infringement of the above Patents after the date judgment is entered;
- d. An award of treble damages under 35 U.S.C. § 284;
- e. A declaration finding this to be an exceptional case, and awarding Brandywine attorney fees under 35 U.S.C. § 285; and
- f. For such further relief at law and in equity as the Court may deem just and proper.

Dated: June 12, 2013

Respectfully submitted,

/s/

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