

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

S3 GRAPHICS Co., Ltd., a Cayman Islands  
Corporation

Plaintiff,

v.

APPLE INC., a California Corporation,

Defendant.

C.A. No.: 11-862-SD

DEMAND FOR JURY TRIAL

**FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff S3 Graphics Co., Ltd. (“S3G”), for its First Amended Complaint against  
Defendant, Apple Inc. (“Apple”), hereby alleges as follows:

**NATURE OF THE ACTION**

1. This is a civil action under the laws of the United States relating to patents and the protection of patent rights, e.g., 35 U.S.C. § 271 et seq., alleging infringement by Apple of four United States patents: U.S. Patent Nos. 5,945,997, 5,581,279, 6,353,440, and 5,977,960.

**PARTIES**

2. S3G is a corporation organized and existing under the laws of the Cayman Islands, with its principal place of business at 2<sup>nd</sup> Fl., Zephyr House, Mary St., P.O. Box 709, Grand Cayman, Grand Cayman Islands, British West Indies. S3G provides innovative graphics visualization technologies and GPU (graphics processing unit) products for mobile devices, desktop computers, and embedded systems.

3. Upon information and belief, Apple is a corporation organized and existing under the laws of California, with its principal place of business at 1 Infinite Loop, Cupertino, California 95014, which:

(a) engages in designing, developing, manufacturing, using, selling, and offering for sale within the United States, and importing into the United States, certain electronic devices and components including, for example and without limitation, the Apple iPhone, iPad, iPod Touch mobile devices, Apple Mac desktop and notebook computers, and associated system and application software sold or distributed by Apple (the “Accused Apple Products”); and

(b) provides certain related services for the Accused Apple Products, directly or indirectly, within the United States.

#### **SUBJECT MATTER JURISDICTION AND VENUE**

4. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a) because this civil action arises under the laws of the United States and because this civil action arises under an Act of Congress relating to patents.

5. This Court has personal jurisdiction over Apple because Apple has established minimum contacts with the State of Delaware. Apple, directly and/or through third-party manufacturers, manufactures and/or assembles Accused Apple Products that are and have been offered for sale, sold, purchased, and used within the State of Delaware. In addition, Apple, directly and/or through its distribution networks, regularly places Accused Apple Products within the stream of commerce, with the knowledge and/or understanding that the products will be sold in the State of Delaware, and Apple provides related services to residents of the State of Delaware. Thus, Apple has purposefully availed itself of the benefits of the State of Delaware, both directly and indirectly.

6. Apple transacts business in the State of Delaware because, among other things, Apple manufactures and distributes, through its wholly owned Apple Store, Christiana Mall, 125 Christiana Mall, Newark, Delaware 19702, and through independent commercial retailers located in the State of Delaware, Accused Apple Products that are offered for sale, sold, purchased, and used within the State of Delaware, and has provided related services offered to residents of the State of Delaware. Apple also has committed tortious acts of patent infringement in the State of Delaware and is subject to personal jurisdiction in the State of Delaware. Venue is thus proper in this judicial district pursuant to 28 U.S.C. §§ 1391(b), (c), (d), and 1400(b).

### **FACTUAL BACKGROUND**

7. The technology at issue relates generally to hardware and software used in the Accused Apple Products and related services.

8. The United States Patent and Trademark Office, having determined that the requirements of law had been complied with, granted U.S. Patent No. 5,945,997 (“the ’997 patent”), entitled “BLOCK-AND BAND-ORIENTED TRAVERSAL IN THREE-DIMENSIONAL TRIANGLE RENDERING,” on August 31, 1999. The ’997 patent issued from application No. 08/883,536, filed on June 26, 1997. S3G owns by assignment the entire right, title, and interest in and to the ’997 patent, including the right to bring this suit and to seek injunctive relief as well as past, present, and future damages. A copy of the ’997 patent is attached as Exhibit 1.

9. The United States Patent and Trademark Office, having determined that the requirements of law had been complied with, granted U.S. Patent No. 5,581,279 (“the ’279 patent”), entitled “VGA CONTROLLER CIRCUITRY,” on December 3, 1996. The ’279 patent issued from application No. 08/147,456, filed on November 5, 1993, which is a continuation of

application No. 07/811,944, now abandoned. S3G owns by assignment the entire right, title, and interest in and to the '279 patent, including the right to bring this suit and to seek injunctive relief as well as past, present, and future damages. A copy of the '279 patent is attached as Exhibit 2.

10. The United States Patent and Trademark Office, having determined that the requirements of law had been complied with, granted U.S. Patent No. 6,353,440 ("the '440 patent"), entitled "HARDWARE ASSIST FOR YUV DATA FORMAT CONVERSION TO SOFTWARE MPEG DECODER," on March 5, 2002. The '440 patent issued from application No. 09/430370, filed on October 29, 1999, which is a continuation of application No. 08/619,203, filed on March 21, 1996, now U.S. Patent No. 6,005,546. S3G owns by assignment the entire right, title, and interest in and to the '440 patent, including the right to bring this suit and to seek injunctive relief as well as past, present, and future damages. A copy of the '440 patent is attached as Exhibit 3.

11. The United States Patent and Trademark Office, having determined that the requirements of law had been complied with, granted U.S. Patent No. 5,977,960 ("the '960 patent"), entitled "APPARATUS, SYSTEMS AND METHODS FOR CONTROLLING DATA OVERLAY IN MULTIMEDIA DATA PROCESSING AND DISPLAY SYSTEMS USING MASK TECHNIQUES," on November 2, 1999. The '960 patent issued from application No. 08/707937, filed on September 10, 1996. S3G owns by assignment the entire right, title, and interest in and to the '960 patent, including the right to bring this suit and to seek injunctive relief as well as past, present, and future damages. A copy of the '960 patent is attached as Exhibit 4.

12. Upon information and belief, Apple has infringed and continues to infringe, directly and/or indirectly, one or more claims of each of the '997, '279, '440 and '960 patents

(collectively, “the Asserted Patents”), by engaging in acts that constitute infringement under 35 U.S.C. § 271, including, but not necessarily limited to:

(a) by making, using, selling, and/or offering for sale, in the State of Delaware and elsewhere within the United States, and by importing into the State of Delaware and the United States, certain electronic devices and components, including, for example and without limitation, the Apple iPhone, iPad, an iPod Touch mobile devices, Apple Mac desktop and notebook computers, alone or in combination with associated system and application software sold or distributed by Apple;

(b) by providing one or more related services with respect to the foregoing electronic devices and components, directly or indirectly, within the United States; and

(c) by inducing and/or contributing to acts of infringement by others with respect to the foregoing electronic devices and components, with direct infringement being accomplished, literally and/or under the doctrine of equivalents, by such persons when they use at least one or more of such electronic products containing computing devices and/or related software and/or services.

**COUNT I — INFRINGEMENT OF U.S. PATENT NO. 5,945,997**

13. Paragraphs 1-12 are incorporated by reference as if fully stated herein.

14. Apple has directly infringed and is directly infringing at least claims 1, 3-5, 9, and 16 of the '997 patent, literally and/or under the doctrine of equivalents, by making, using, selling, and offering for sale within the United States, and/or importing into the United States, one or more of the Accused Apple Products and by providing related services that are covered by one or more claims of the '997 patent.

15. Upon information and belief, Apple has indirectly infringed the '997 patent by contributing to and/or inducing, and will continue to contribute to and/or to induce, infringement of at least claims 1, 3-5, 9, and 16 of the '997 patent by others in this judicial district and elsewhere in the United States, with direct infringement being accomplished, literally and/or under the doctrine of equivalents, by users of at least one or more of the Accused Apple Products and related services.

16. S3G has been and continues to be damaged by Apple's infringement of the '997 Patent, in an amount to be determined at trial. Upon information and belief, Apple has knowledge of the '997 patent and, if and to the extent it may be required, has received actual notice of its infringement of the '997 patent at least as of the filing date of the Complaint and/or this First Amended Complaint, if not earlier.

17. S3G has suffered irreparable injury for which it has no adequate remedy at law and will continue to suffer such irreparable injury unless Apple's infringement of the '997 patent is enjoined by this Court.

18. Upon information and belief, Apple's infringement of the '997 patent is willful and, together with other conduct, renders this case exceptional and entitles S3G to enhanced damages under 35 U.S.C. § 284 and its reasonable attorney fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

**COUNT II — INFRINGEMENT OF U.S. PATENT NO. 5,581,279**

19. Paragraphs 1-12 are incorporated by reference as if fully stated herein.

20. Apple has directly infringed and is directly infringing at least claims 1, 5, and 9 of the '279 patent, literally and/or under the doctrine of equivalents, by making, using, selling, and

offering for sale within the United States, and/or importing into the United States, one or more of the Accused Apple Products and by providing related services that are covered by one or more claims of the '279 patent.

21. Upon information and belief, Apple has indirectly infringed the '279 patent by contributing to and/or inducing, and will continue to contribute to and/or to induce, infringement of at least claims 1, 5, and 9 of the '279 patent by others in this judicial district and elsewhere in the United States, with direct infringement being accomplished, literally and/or under the doctrine of equivalents, by users of at least one or more of the Accused Apple Products and related services.

22. S3G has been and continues to be damaged by Apple's infringement of the '279 Patent, in an amount to be determined at trial. Upon information and belief, Apple has knowledge of the '279 patent and, if and to the extent it may be required, has received actual notice of its infringement of the '279 patent at least as of the filing date of the Complaint and/or this First Amended Complaint, if not earlier.

23. S3G has suffered irreparable injury for which it has no adequate remedy at law and will continue to suffer such irreparable injury unless Apple's infringement of the '279 patent is enjoined by this Court.

24. Upon information and belief, Apple's infringement of the '279 patent is willful and, together with other conduct, renders this case exceptional and entitles S3G to enhanced damages under 35 U.S.C. § 284 and its reasonable attorney fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

**COUNT III — INFRINGEMENT OF U.S. PATENT NO. 6,353,440**

25. Paragraphs 1-12 are incorporated by reference as if fully stated herein.

26. Apple has directly infringed and is directly infringing at least claims 1-4 and 12-15 of the '440 patent, literally and/or under the doctrine of equivalents, by making, using, selling, and offering for sale within the United States, and/or importing into the United States, one or more of the Accused Apple Products and by providing related services that are covered by one or more claims of the '440 patent.

27. Upon information and belief, Apple has indirectly infringed the '440 patent by contributing to and/or inducing, and will continue to contribute to and/or to induce, infringement of at least claims 1-4 and 12-15 of the '440 patent by others in this judicial district and elsewhere in the United States, with direct infringement being accomplished, literally and/or under the doctrine of equivalents, by users of at least one or more of the Accused Apple Products and related services.

28. S3G has been and continues to be damaged by Apple's infringement of the '440 Patent, in an amount to be determined at trial. Upon information and belief, Apple has knowledge of the '440 patent and, if and to the extent it may be required, has received actual notice of its infringement of the '440 patent at least as of the filing date of the Complaint and/or this First Amended Complaint, if not earlier.

29. S3G has suffered irreparable injury for which it has no adequate remedy at law and will continue to suffer such irreparable injury unless Apple's infringement of the '440 patent is enjoined by this Court.



30. Upon information and belief, Apple's infringement of the '440 patent is willful and, together with other conduct, renders this case exceptional and entitles S3G to enhanced damages under 35 U.S.C. § 284 and its reasonable attorney fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

**COUNT IV — INFRINGEMENT OF U.S. PATENT NO. 5,977,960**

31. Paragraphs 1-12 are incorporated by reference as if fully stated herein.

32. Apple has directly infringed and is directly infringing at least claims 1 and 7 of the '960 patent, literally and/or under the doctrine of equivalents, by making, using, selling, and offering for sale within the United States, and/or importing into the United States, one or more of the Accused Apple Products and by providing related services that are covered by one or more claims of the '960 patent.

33. Upon information and belief, Apple has indirectly infringed the '960 patent by contributing to and/or inducing, and will continue to contribute to and/or to induce, infringement of at least claims 1 and 7 of the '960 patent by others in this judicial district and elsewhere in the United States, with direct infringement being accomplished, literally and/or under the doctrine of equivalents, by users of at least one or more of the Accused Apple Products and related services.

34. S3G has been and continues to be damaged by Apple's infringement of the '960 Patent, in an amount to be determined at trial. Upon information and belief, Apple has knowledge of the '960 patent and, if and to the extent it may be required, has received actual notice of its infringement of the '960 patent at least as of the filing date of the Complaint and/or this First Amended Complaint, if not earlier.

35. S3G has suffered irreparable injury for which it has no adequate remedy at law and will continue to suffer such irreparable injury unless Apple's infringement of the '960 patent is enjoined by this Court.

36. Upon information and belief, Apple's infringement of the '960 patent is willful and, together with other conduct, renders this case exceptional and entitles S3G to enhanced damages under 35 U.S.C. § 284 and its reasonable attorney fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff S3G prays the Court to issue the following judgment against Apple:

A. That Apple has infringed, directly and/or indirectly, each and every one of the Asserted Patents;

B. That Apple, its officers, agents, employees, and those persons in active concert or participation with any of them, and their successors and assigns, be permanently enjoined from direct and indirect infringement, including, but not limited to, inducement of infringement and contributory infringement, of each and every one of the Asserted Patents, including, but not limited to, an injunction against making, using, selling, and/or offering for sale within the United States, and/or against importing into the United States, any products that infringe the Asserted Patents and/or providing any services that infringe the Asserted Patents.

C. That S3G be awarded all damages adequate to compensate it for Apple's infringement of the Asserted Patents, such damages to be determined by a jury and, if necessary

to adequately compensate S3G for the infringement, an accounting, together with prejudgment and post-judgment interest at the maximum rate allowed by law;

D. That S3G be awarded enhanced damages, as provided in 35 U.S.C. § 284, up to three times the amount found or assessed, for Apple's willful infringement;

E. That the Court find this case to be exceptional, as provided in 35 U.S.C. § 285, and award S3G its reasonable attorney fees, together with any and all allowable fees, costs, and/or other expenses incurred in connection with this action;

F. That the Court award such other relief as the Court may deem just and proper under the circumstances.

**DEMAND FOR JURY TRIAL**

Plaintiff S3G demands a trial by jury on all claims.

Dated: October 13, 2011

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