

many others. Terminal Reality also developed a video game graphics engine, called the “Infernal Engine,” used in many of Terminal Reality’s games. In addition to using the “Infernal Engine” in its own games, Terminal Reality successfully licensed the “Infernal Engine” to other video game developers for use in their video games. On June 3, 2014, Terminal Reality granted Infernal Technology an exclusive license to a number of patents, including the Asserted Patents as defined below, and the exclusive right to enforce same. Infernal Technology and Terminal Reality are collectively referred to herein as “Plaintiffs.”

3. Upon information and belief, Defendant Electronic Arts, Inc. (“EA”) is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business located at 290 Redwood Shores Parkway, Redwood City, California 94065. EA may be served with process through its registered agent National Corporate Research, Ltd., 800 Brazos Street, Suite 400, Austin, Texas 78701.

4. Upon information and belief, Defendant EA Digital Illusions Creative Entertainment (“DICE”) is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business located at 5510 Lincoln Boulevard, Playa Vista, California 90094. DICE may be served with process through its registered agent National Corporate Research, Ltd., 800 Brazos Street, Suite 400, Austin, Texas 78701. On information and belief, DICE is a subsidiary of EA. EA and Dice are collectively referred to herein as “Defendants.”

JURISDICTION AND VENUE

5. This is an action for patent infringement arising under the patent laws of the United States of America, Title 35, United States Code. This Court has original jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

6. On information and belief, Defendants are engaged in the business of developing, publishing, distributing, and/or selling video games that employ the Frostbite Engine (“Frostbite”) including, but not limited to, *Army of Two: The Devil’s Cartel*, *Battlefield 3*, *Battlefield 4*, *Dragon Age: Inquisition*, *EA PGA Tour*, *Mass Effect 4*, *Need for Speed Rivals*, and *Star Wars: Battlefront* (*Army of Two: The Devil’s Cartel* and all other games developed, published, distributed, and/or sold by Defendants that use the Frostbite Engine or any similar engine are referred to herein as the “Accused Frostbite Games”). On information and belief, Defendants market and sell the Accused Frostbite Games to customers in the United States, including within this District.

7. On information and belief, EA is engaged in the business of developing, publishing, distributing, and/or selling video games that employ the CryENGINE (the Frostbite Engine, CryENGINE, and all similar engines are collectively referred to herein as the “Accused Engines”) including, but not limited to, *Crysis*, *Crysis 2*, and *Crysis 3* (*Crysis* and all other games developed, published, distributed, and/or sold by Defendants that use the CryENGINE or any similar engine are referred to herein as the “Accused CryENGINE Games”). On information and belief, Defendants market and sell the Accused CryENGINE Games to customers in the United States, including within this District.

8. The Accused Engines, Accused Frostbite Games, and Accused CryENGINE Games are collectively referred to herein as the “Accused Instrumentalities.”

9. Upon information and belief, each of the Defendants is subject to this Court’s general and/or specific personal jurisdiction because it (a) is a resident of the State of Texas; and/or (b) has designated an agent for service of process in the State of Texas; and/or (c) has committed acts of infringement in the State of Texas as alleged below; and/or (d) is engaged in

continuous and systematic activities in the State of Texas. Therefore, this Court has personal jurisdiction over each of the Defendants under the Texas long-arm statute, TEX. CIV. PRAC. & REM. CODE §17.042.

10. Venue is proper in this district under 28 U.S.C. §§ 1391(c) and 1400(b). On information and belief, Terminal Reality and each Defendant have a regular and established place of business in this district, and/or have transacted business in this district, and each Defendant has committed and/or induced acts of patent infringement in this district.

THE PATENTS-IN-SUIT

11. On March 26, 2002 the United States Patent and Trademark Office issued United States Patent No. 6,362,822 (the “‘822 Patent”) entitled “Lighting and Shadowing Methods and Arrangements for use in Computer Graphic Simulations,” a true copy of which is attached as Exhibit A.

12. On June 13, 2006, the United States Patent and Trademark Office issued United States Patent No. 7,061,488 (the “‘488 Patent”) entitled “Lighting and Shadowing Methods and Arrangements for use in Computer Graphic Simulations,” a true copy of which is attached as Exhibit B. The ‘488 Patent is a continuation-in-part of the ‘822 Patent. The ‘822 and ‘488 Patents are collectively referred to as the “Asserted Patents.”

13. Infernal Technology is the exclusive licensee of the ‘822 and ‘488 Patents, and has the exclusive right to sue for and recover all past, present and future damages for infringement of the Asserted Patents.

CLAIM 1 -- INFRINGEMENT OF U.S. PATENT NO. 6,362,822

14. Plaintiffs incorporate paragraphs 1 through 13 as though fully set forth herein.

15. Upon information and belief, Defendants have been and now are directly and/or indirectly infringing one or more claims of the '822 Patent by (1) making, importing, using, offering for sale, and/or selling the patented inventions, (2) by actively inducing others to use the patented inventions in an infringing manner, or (3) by contributing to the use of the patented inventions in the United States.

16. More particularly, without limitation, upon information and belief, Defendants are now directly infringing one or more claims of the '822 Patent by making, importing, using (including use for testing purposes), offering for sale, and/or selling the Accused Instrumentalities, all in violation of 35 U.S.C. § 271(a). The Accused Instrumentalities perform the lighting and shadowing methods described and claimed in the '822 Patent.

17. For example, but not as a limitation, Defendants' direct infringement of Claims 1-10 of the '822 Patent is shown in the claim charts of Exhibits C and D.

18. Each of the Accused Instrumentalities performs a shadow rendering method for use in a computer system.

19. Each of the Accused Instrumentalities provides observer data of a simulated multi-dimensional scene.

20. Each of the Accused Instrumentalities provides lighting data associated with a plurality of simulated light sources arranged to illuminate the simulated multi-dimensional scene, the lighting data including light image data.

21. For each of the plurality of light sources, each of the Accused Instrumentalities compares at least a portion of the observer data with at least a portion of the lighting data to determine if a modeled point within the scene is illuminated by the light source, and stores at

least a portion of the light image data associated with the modeled point and the light source in a light accumulation buffer.

22. Each of the Accused Instrumentalities combines at least a portion of the light accumulation buffer with the observer data.

23. Each of the Accused Instrumentalities displays the resulting image data to a computer screen.

24. Therefore, by way of example but not as a limitation, Defendants have and continue to directly infringe at least Claim 1 of the '822 Patent. In addition, Defendants have and continue to infringe at least Claims 2-10 of the '822 Patent as shown in the claim charts of Exhibits C and D.

25. In addition, or in the alternative, Defendants have been and are now indirectly infringing one or more claims of the Asserted Patents by (1) inducing customers to use the Accused Instrumentalities to directly infringe one or more claims of the '822 Patent in violation of 35 U.S.C. § 271(b), and/or by (2) contributing to customers' direct infringement of one or more claims of the '822 Patent by their use of the Accused Instrumentalities in violation of 35 U.S.C. § 271(c). The Accused Instrumentalities perform the lighting and shadowing methods described and claimed in the '822 Patent, and Defendants have engaged in indirect infringement by their conduct of providing their customers with the infringing Accused Instrumentalities in order to enable those customers to use the Accused Instrumentalities to directly infringe the '822 Patent. On information and belief, Defendants have intended, and continue to intend, to induce patent infringement by their customers, and have had knowledge that their inducing acts would cause infringement or have been willfully blind to the possibility that their inducing acts would cause infringement.

26. On information and belief, Defendants' customers purchase the Accused Instrumentalities and, when the customers use the Accused Instrumentalities, a lighting and shadowing method is performed as described and claimed in the '822 Patent. Thus, Defendants' customers directly infringe the claimed methods of the '822 Patent by using the Accused Instrumentalities. Because the performance of the claimed lighting and shadowing methods is an essential part of the functionality of the Accused Instrumentalities, the Accused Instrumentalities do not have any substantial uses that do not infringe the '822 Patent. On information and belief, Defendants are or should be aware that the Accused Instrumentalities perform the claimed lighting and shadowing methods and, therefore, that Defendants' customers will infringe the '822 Patent by using the Accused Instrumentalities.

27. Plaintiffs have been damaged by Defendants' infringing activities, and will be irreparably harmed unless those infringing activities are preliminarily and permanently enjoined by this Court. Plaintiffs do not have an adequate remedy at law.

28. Defendants have had actual notice of the existence of the '822 Patent at least as of the filing of this action. Despite such notice, Defendants will likely continue in acts of infringement without regard to the '822 Patent unless otherwise enjoined by this Court.

CLAIM 2 – INFRINGEMENT OF U.S. PATENT NO. 7,061,488

29. Plaintiffs incorporate paragraphs 1 through 13 as though fully set forth herein.

30. Upon information and belief, Defendants have been and now are directly and/or indirectly infringing one or more claims of the '488 Patent by (1) making, importing, using, offering for sale, and/or selling the patented inventions, (2) by actively inducing others to use the patented inventions in an infringing manner, or (3) by contributing to the use of the patented inventions in the United States.

31. More particularly, without limitation, upon information and belief, Defendants are now directly infringing one or more claims of the '488 Patent by making, importing, using (including use for testing purposes), offering for sale, and/or selling the Accused Instrumentalities, all in violation of 35 U.S.C. § 271(a). The Accused Instrumentalities perform the lighting and shadowing methods described and claimed in the '488 Patent.

32. For example, but not as a limitation, Defendants' direct infringement of Claims 1-10 of the '488 Patent is shown in the claim charts of Exhibits E and F.

33. Each of the Accused Instrumentalities performs a shadow rendering method for use in a computer system.

34. Each of the Accused Instrumentalities provides observer data of a simulated multi-dimensional scene.

35. Each of the Accused Instrumentalities provides lighting data associated with a plurality of simulated light sources arranged to illuminate the simulated multi-dimensional scene, the lighting data including light image data.

36. For each of the plurality of light sources, each of the Accused Instrumentalities compares at least a portion of the observer data with at least a portion of the lighting data to determine if a modeled point within the scene is illuminated by the light source, and stores at least a portion of the light image data associated with the modeled point and the light source in a light accumulation buffer.

37. Each of the Accused Instrumentalities combines at least a portion of the light accumulation buffer with the observer data.

38. Each of the Accused Instrumentalities outputs the resulting image data.

39. Therefore, by way of example but not as a limitation, Defendants have and continue to directly infringe at least Claim 1 of the '488 Patent. In addition, Defendants have and continue to infringe at least Claims 2-10 and 27-36 of the '488 Patent as shown in the claim charts of Exhibits E and F.

40. In addition, or in the alternative, Defendants have been and are now indirectly infringing one or more claims of the Asserts Patents by (1) inducing customers to use the Accused Instrumentalities to directly infringe one or more claims of the '488 Patent in violation of 35 U.S.C. § 271(b), and/or by (2) contributing to customers' direct infringement of one or more claims of the '488 Patent by their use of the Accused Instrumentalities in violation of 35 U.S.C. § 271(c). The Accused Instrumentalities perform the lighting and shadowing methods described and claimed in the '488 Patent, and Defendants have engaged in indirect infringement by their conduct of providing their customers with the infringing Accused Instrumentalities in order to enable those customers to use the Accused Instrumentalities to directly infringe the '488 Patent. On information and belief, Defendants have intended, and continue to intend, to induce patent infringement by their customers, and have had knowledge that their inducing acts would cause infringement or have been willfully blind to the possibility that their inducing acts would cause infringement.

41. On information and belief, Defendants' customers purchase the Accused Instrumentalities and, when the customers use the Accused Instrumentalities, a lighting and shadowing method is performed as described and claimed in the '488 Patent. Thus, Defendants' customers directly infringe the claimed methods of the '488 Patent by using the Accused Instrumentalities. Because the performance of the claimed lighting and shadowing methods is an essential part of the functionality of the Accused Instrumentalities, the Accused Instrumentalities

do not have any substantial uses that do not infringe the '488 Patent. On information and belief, Defendants are or should be aware that the Accused Instrumentalities perform the claimed lighting and shadowing methods and, therefore, that Defendants' customers will infringe the '488 Patent by using the Accused Instrumentalities.

42. Plaintiffs have been damaged by Defendants' infringing activities, and will be irreparably harmed unless those infringing activities are preliminarily and permanently enjoined by this Court. Plaintiffs do not have an adequate remedy at law.

43. Defendants have had actual notice of the existence of the '488 Patent at least as of the filing of this action. Despite such notice, Defendants will likely continue in acts of infringement without regard to the '488 Patent unless otherwise enjoined by this Court.

DEMAND FOR JURY TRIAL

44. Plaintiffs, under Rule 38 of the Federal Rules of Civil Procedure, request a trial by jury of any issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs request the following relief:

1. A judgment in favor of Plaintiffs that Defendants have directly infringed, and/or have indirectly infringed by way of inducement and/or contributory infringement, one or more claims of the Asserted Patents;

2. A judgment that Plaintiffs have been irreparably harmed by Defendants' infringing activities and are likely to continue to be irreparably harmed by Defendants' continued infringement;

3. Preliminary and permanent injunctions prohibiting Defendants and their officers, agents, servants, employees, and those persons in active concert or participation with any of

them, as well as all successors or assignees of the interests or assets related to the Accused Instrumentalities, from further infringement, direct or indirect, of the Asserted Patents;

4. A judgment and order requiring Defendants to pay Plaintiffs damages adequate to compensate for infringement under 35 U.S.C. § 284, which damages may include lost profits but in no event shall be less than a reasonable royalty for the use made of the inventions of the Asserted Patents, including pre- and post-judgment interest and costs, including expenses and disbursements; and

5. Any and all such further necessary relief as the Court may deem just and proper under the circumstances.

Dated: September 16, 2015

Respectfully submitted,

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