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UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

FUZZYSHARP TECHNOLOGIES INCORPORATED, Plaintiff, vs. NVIDIA CORPORATION, Defendant.	Civil Action No. 12-CV-06375 JST **AMENDED COMPLAINT FOR PATENT INFRINGEMENT AND DEMAND FOR JURY TRIAL**

NOW COMES Plaintiff, FUZZYSHARP TECHNOLOGIES INCORPORATED

("FST"), through its attorneys, and files this Amended Complaint for Patent Infringement and

Demand for Jury Trial against Nvidia Corporation ("Nvidia") pursuant to the Order dated April

18, 2013.

1   **JURISDICTION AND VENUE**

2   1.   This is an action for patent infringement of United States Patent No. 6,172,679

3   (hereinafter "the '679 Patent"), and United States Patent No. 6,618,047

4   (hereinafter "the '047 Patent") pursuant to the laws of the United States of

5   America as set forth in Title 35 Sections 271 and 281 of the United States Code.

6   2.   This court has subject matter jurisdiction over this action pursuant to 28 U.S.C.

7   Sec. 1338(a) and 28 U.S.C. Sec. 1331.

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

9   because Defendant Nvidia has committed acts of infringement in this Federal

10   District.

11   4.   Plaintiff FST, is a corporation organized under the laws of the State of Texas.

12   5.   On information and belief, Defendant Nvidia is a Delaware Corporation, and has a

13   corporate office at 2701 San Tomas Expressway, Santa Clara, CA 95050.

14   **CAUSES OF ACTION FOR PATENT INFRINGEMENT**

15   6.   On January 9, 2001, the '679 Patent entitled "VISIBILITY CALCULATIONS

16   FOR 3D COMPUTER GRAPHICS", was duly and legally issued to Hong Lip

17   Lim, as the sole patentee.

18   7.   The '679 Patent is assigned entirely to Plaintiff FST

19   8.   Plaintiff FST is the sole owner of the '679 Patent, and has standing to bring this

20   action.

21   9.   On September 9, 2003, the '047 Patent entitled "VISIBILITY CALCULATIONS

22   FOR 3D COMPUTER GRAPHICS", was duly and legally issued to Hong Lip

23   Lim, as the sole patentee.

24   10.   The '047 Patent is assigned entirely to FST.

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BACKGROUND

2   11.   The patents-in-suit disclose and claim methods of improving the rendering of 3D

3   graphic images on a monitor or the like. Hewlett Packard was probably the

4   earliest company to recognize the importance of the inventions, and described the

5   key step as "occlusion" to suggest that objects in a scene to be rendered that were

6   behind other objects would be excluded from further processing by the computer,

7   thereby minimizing the demand on the resources of the computer. The names

8   "occlusion" and "occlusion culling" are commonly used in the industry to refer to

9   the methods covered by the patents-in-suit. The Defendant was among the many

10   companies to rush to the market with hardware designed to employ the inventions

11   of FST. See Ex. A, Chapter 6 from "Hardware Occlusion Queries Made Useful".

12   Chapter 6 is taken from an Nvidia web site as indicated in the footnote of each

13   page. The Chapter 6 discloses that a program query is used to test if an object is

14   occluded and the query was created by Nvidia. Nvidia at page 20 does, however,

15   acknowledge that the technique disclosed may not be free from Intellectual

16   Property claims. This is possibly an oblique acknowledgment of the Plaintiff's

17   rights. Ex. B shows the occlusion query created by Nvidia and urged for use by

18   the graphics industry by Nvidia.

19 12.   Initially, the test to determine if an object in a 3D scene was hidden before

20   rendering a computer scene of a 3D scene was developed as part of the library of

21   OpenGL and the test was called, "occlusion query". Nvidia added its version to

22   the OpenGL Library and touted its effectiveness, thereby urging the graphics

23   industry to carry out methods infringing FST's patents. Subsequently, Microsoft

24   decided on a different approach for an occlusion type query and for awhile,

25   computer systems and graphics cards for accelerating graphic production worked

26   with either the occlusion query in the OpenGL Library , or Microsoft's Library,

27   DirectX, or both. See Ex. C on the development of DirectX.

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13.   Microsoft named its queries relevant to occlusion,

"D3D11_QUERY_OCCLUSION, and

D3D11_QUERY_OCCLUSION_PREDICATE. See Ex. D showing that the test

determines if "samples passed the depth and stencil tests".

14.   Nvidia sell and offers to sell graphic cards operable under Microsoft DirectX 11

for creating graphic displays. See Ex. E.

15.   FST sued Nvidia on September 10, 2010 on the same patents-in-suit in this

Judicial District, thereby providing Nvidia with good notice that it was and is

engaged in patent infringement of the patents-in-suit.

COUNT ONE

16.   Plaintiff FST, repeats and incorporates herein the allegations contained in

paragraphs 1 through 15 above.

17.   Defendant Nvidia is engaged in wilful infringement of at least claim 1 of the '679

Patent pursuant to 35 U.S.C. § 271(a) by selling, and offering to sell Graphic

Processors Units capable of performing occlusion culling and the like during the

computer graphics rendering process.

COUNT TWO

18.   Plaintiff, FST, repeats and incorporates herein the allegations contained in

paragraphs 1 through 15 above.

19.   Defendant Intel is engaged in wilful infringement of at least claim 1 of the '0479

Patent pursuant to 35 U.S.C. § 271(a) at least by selling, and offering to sell

Graphic Processors Units capable of performing occlusion culling and the like

during the computer graphics rendering process.

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JURY DEMAND

2   20.   Pursuant to Fed. R. Civ. P. 38, Plaintiff hereby demands a jury trial as to all issues

3   in this lawsuit.

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PRAYER FOR RELIEF

2   WHEREFORE, Plaintiff respectfully requests this Court to:

3   a.   Enter judgment for Plaintiff on this Amended Complaint;

4   b.   Order that an accounting be had for the damages to the Plaintiff by the infringing

5   activities of the Defendant;

6   c.   Award reasonable damages in the form of reasonable royalties.

7   d.   Award Plaintiff treble damages due to willful patent infringement;

8   e.   Award Plaintiff interest and costs; and

9   f.   Award Plaintiff such other and further relief as this Court may deem just and

10   equitable.

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12   THE PLAINTIFF
FUZZYSHARP TECHNOLOGIES
INCORPORATED

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15   /s/ David Fink
David Fink

16   Attorney for the Plaintiff

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