**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

FASTVDO LLC,	
Plaintiff,	
v.	**Civil Action No.**
NVIDIA CORPORATION,	**DEMAND FOR JURY TRIAL**
Defendant.	

COMPLAINT

Plaintiff FastVDO LLC ("FastVDO") alleges as follows:

PARTIES

1.   FastVDO is a Florida limited liability corporation with a principal place of business at 750 N. Atlantic Ave., Cocoa Beach, FL 32931.

2.   On information and belief, NVIDIA Corporation ("NVIDIA") is a Delaware corporation with a principal place of business at 2701 San Tomas Expressway, Santa Clara, CA 95050.

JURISDICTION AND VENUE

3.   This is an action for patent infringement arising under the patent laws of the United States of America, 35 U.S.C. § 1, *et seq.*, including § 271. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

4.   This Court has personal jurisdiction over NVIDIA because, among other reasons, NVIDIA is incorporated under the laws of the State of Delaware, and NVIDIA has conducted and continues to conduct regular and ongoing business in Delaware. Additionally, on information and belief, NVIDIA has committed direct and indirect acts of infringement in this District by making, using, importing, offering for sale, and/or selling infringing products, and inducing others to perform method steps claimed by FastVDO's patent in Delaware.

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5.   Venue is proper in this district under 28 U.S.C. §§ 1391(b)-(c) and 1400(b) because, among other reasons, NVIDIA is incorporated under the laws of the State of Delaware, and NVIDIA has conducted and continues to conduct regular and ongoing business in Delaware. Additionally, on information and belief, NVIDIA has committed direct and indirect acts of infringement in this District by making, using, importing, offering for sale, and/or selling infringing products, and inducing others to perform method steps claimed by FastVDO's patent in Delaware.

COUNT I

(Infringement of U.S. Patent No. RE 40,081)

6.   FastVDO is the owner by assignment and merger of United States Patent No. RE 40,081 ("the '081 patent"), entitled "Fast Signal Transforms With Lifting Steps." The '081 patent reissued on February 19, 2008, based on an initial application filed December 16, 1998. A true and correct copy of the '081 patent is attached hereto as Exhibit A. The '081 patent enables digital video compression through the coding and decoding of blocks of digital image intensities with a block coder and transform coder that utilizes an invertible linear transform having a +/-1 butterfly step, a lifting step, and a scaling factor. International Telecommunications Union – Telecommunication Standardization Sector (ITU-T) H.264 (also known as MPEG-4 Part 10, Audio Video Coding or AVC) (herein "H.264" or "MPEG-4 AVC") is a video compression standard that performs digital image compression by coding and decoding blocks of digital image intensities with a block coder and with a transform coder that includes an invertible linear transform, which is representable as a cascade using at least one +/-1 butterfly step, at least one lifting step, and at least one scaling factor. The FastVDO patent is essential to the H.264 standard, and it was properly identified to the International Telecommunications Union on May 14, 2003, before the promulgation of the H.264 standard in March 2005.

7.   On information and belief, in violation of one or more provisions of 35 U.S.C. § 271, NVIDIA has infringed one or more claims of the '081 patent by making, using, importing, selling, or offering to sell processors, graphics cards, boards, software, applications and tools that

use H.264 to code and/or decode video, including, but not limited to Tegra 2 and Tegra 3 Super

Processors, GeForce Grid Processors, Quadro K5000 graphics cards, VGX Boards, and the

Elemental Accelerator for NVIDIA Quadro. Additionally, NVIDIA has had knowledge of the

'081 patent since at least November 8, 2012,[1] or alternatively since being served with this

complaint, and NVIDIA has induced others, such as its customers and/or consumers of H.264

content produced by its customers, to code and/or decode video with H.264 and practice the

method steps of the '081 patent with its marketing materials, advertising materials, manuals and

customer support services since at least this time. For example, the specifications for the Tegra 2

and Tegra 3 super processors show that H.264 is used for encoding, decoding and

teleconferencing.[2] [3] NVIDIA similarly promotes the H.264 encoding features of its Quadro

K5000[4]:

H.264 encoder[1]

Dedicated H.264 encode engine that' independent of 3D/compute pipeline and delivers faster than real-time performance for transcoding, video editing, and other encoding applications.

NVIDIA's VGX boards are advertised as being capable of encoding simultaneous streams with

H.264 for superior quality[5]:

H.264 Encoding[3]

The Kepler GPU includes a high-performance H.264 encoding engine capable of encoding simultaneous streams with superior quality. This provides a giant leap forward in cloud server efficiency by offloading the CPU from encoding functions and allowing the encode function to scale with the number of GPUs in a server.

NVIDIA's Elemental Accelerator is marketed as a video processing solution that "performs

GPU-accelerated conversion of commonly distributed video formats to H.264 output ready for

upload to the web or burning to Blu-Ray disc."[6] Additionally, NVIDIA provides technical

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[1] *See* Exhibit B.
[2] See http://www.nvidia.com/object/tegra-superchip.html (attached hereto as Exhibit C).
[3] *See* http://www.nvidia.com/object/tegra-3-processor.html (attached hereto as Exhibit D).
[4] *See* http://www.nvidia.com/object/quadro-k5000.html#pdpContent=1 (attached hereto as Exhibit E)
[5] *See* http://www.nvidia.com/object/vgx-boards.html (attached hereto as Exhibit F).
[6] *See* http://www.nvidia.com/object/IO_62559.html (attached hereto as Exhibit G).

support to assist its customers' use of the H.264 capabilities of its products. For example, a technical brief released by NVIDIA outlines the "design and programming considerations" required to build a real-time H.264 video encoder and server using NVIDIA technology. *See* VIDEO CAPTURE, ENCODING, AND STREAMING IN A MULTI-GPU SYSTEM at 4.[7] An overview of the system described in this technical brief is shown below:
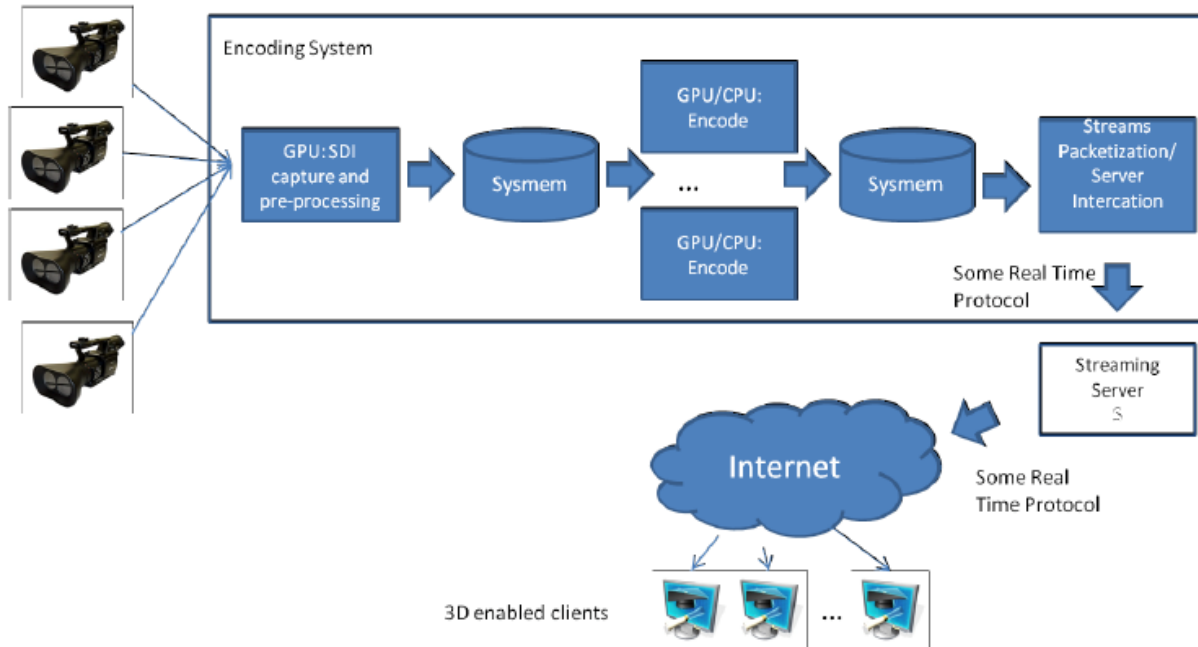
Id. at 5. As explained in the corresponding text of this technical brief, this figure shows: multiple video feeds being captured to the video memory of an NVIDIA Quadro® or Tesla™ GPU by the NVIDIA Quadro® SDI capture card (*see, id*. at 6); video data being compressed by the NVIDIA CUDA VIDEO ENCODER with H.264 (*see*, *id* at 11); and streaming the compressed video data to internet clients (*see id*. at 6). These marketing and technical materials exemplify how NVIDIA induces its customers to use its accused products to code and/or decode videos with H.264, and/or code video with H.264 and transmit compressed video to others for decoding and viewing to perform the method steps of the '081 patent (e.g., coding and decoding

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[7] *See* http://www.nvidia.com/docs/IO/40049/TB-Quadro_VideoCaptureStreaming_v01.pdf (attached hereto as Exhibit H).

blocks of digital image intensities with a block coder and transform coder that utilizes an invertible linear transform having a +/-1 butterfly step, a lifting step, and a scaling factor). By continuing the representative aforementioned activities with knowledge of the '081 patent and its essentiality to the H.264 standard, NVIDIA has known, or should have known, that it was inducing infringement by causing the method steps of the '081 patent to be performed.

PRAYER FOR RELIEF

FastVDO prays for the following relief:

1.   A judgment that NVIDIA has directly infringed (either literally or under the doctrine of equivalents) one or more claims of the '081 patent;

2.   A judgment that NVIDIA has induced the infringement of one or more claims of the '081 patent;

3.   A permanent injunction enjoining NVIDIA and its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert or participation with them, from infringing each of the '081 patent;

4.   An award of damages resulting from NVIDIA's acts of infringement in accordance with 35 U.S.C. § 284;

5.   A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to FastVDO its reasonable attorneys' fees;

6.   A judgment and order requiring NVIDIA to provide an accounting and to pay supplemental damages to FastVDO, including without limitation, pre-judgment and post-judgment interest; and

7.   Any and all other relief to which FastVDO may show itself to be entitled.

DEMAND FOR JURY TRIAL

FastVDO demands a trial by jury on all issues so triable.

Dated: November 9, 2012

FARNAN LLP

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