

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

---

<b>Advanced Processor Technologies LLC</b>	§	
	§	
<b>Plaintiff,</b>	§	
	§	
<b>v.</b>	§	
	§	<b>Civil Action No. 2:12-cv-157</b>
<b>NVIDIA Corporation,</b>	§	
	§	<b>Jury Trial Demanded</b>
<b>Defendant.</b>	§	
	§	
	§	

---

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Advanced Processor Technologies LLC (“APT”) files this Complaint against Defendant NVIDIA Corporation (“NVIDIA”) and alleges as follows:

**SUBJECT MATTER JURISDICTION AND VENUE**

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. §§ 101, *et seq.* This Court has subject matter jurisdiction over this patent infringement action under 28 U.S.C. §§ 1331, 1332, and 1338(a).

2. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391 and/or 1400.

**PARTIES AND PERSONAL JURISDICTION**

3. Plaintiff APT is a limited liability company organized and existing under the laws of the State of Texas with a principal place of business at 6136 Frisco Square Blvd., 4<sup>th</sup> floor, Frisco, Texas 75034.

4. On information and belief, Defendant NVIDIA is a corporation organized under the laws of the State of Delaware and maintains its principal place of business at 2701 San Tomas Expressway, Santa Clara, California 95050.

5. On information and belief, NVIDIA is registered to do business in the State of Texas and has conducted and continues to conduct business within the State of Texas, including maintaining offices at 740 East Campbell Road, Suite 300, Richardson, Texas 75081, and 11001 Lakeline Boulevard, Building 2, Suite 100, Austin, Texas 78717. Upon information and belief, NVIDIA has also availed itself of the laws of Texas at least by employing Texas residents within Texas. NVIDIA directly or through intermediaries ships, distributes, offers for sale, sells, and advertises its products, including the products accused of infringement in this case, in the United States, the State of Texas, and the Eastern District of Texas.

6. This Court has personal jurisdiction over NVIDIA. NVIDIA has conducted and does conduct business within the State of Texas. NVIDIA, directly or through intermediaries, imports, ships, distributes, offers for sale, sells, and/or advertises its products in the United States, the State of Texas, and the Eastern District of Texas.

7. Additionally, NVIDIA has purposefully and voluntarily sold the products accused of infringement in this case directly to consumers in the Eastern District of Texas and/or placed one or more of the accused products, as described below, into the stream of commerce with the expectation that they will be purchased by consumers in the Eastern District of Texas. NVIDIA has thus committed patent infringement within the State of Texas, and particularly within the Eastern District of Texas.

**THE PATENTS-IN-SUIT:  
U.S. PATENT NO. 5,796,978;  
U.S. PATENT NO.6,047,354; and  
U.S. PATENT NO.6,092,172**

**Ownership**

8. United States Patent No. 5,796,978 (the '978 patent), entitled "Data Processor Having an Address Translation Buffer Operable With Variable Page Sizes," was duly and legally

issued to Hitachi, Ltd. (Hitachi) on August 18, 1998. A copy of the '978 patent is attached as Exhibit A and is made a part of this Complaint.

9. United States Patent No. 6,047,354 (the '354 patent), entitled "Data Processor For Implementing Virtual Pages Using a Cache and Register," was duly and legally issued to Hitachi on April 4, 2000. The '354 patent is a continuation of the '978 patent. A copy of the '354 patent is attached as Exhibit B and is made a part of this Complaint.

10. United States Patent No. 6,092,172 (the '172 patent), entitled "Data Processor and Data Processing System Having Two Translation Lookaside Buffers," was duly and legally issued to Hitachi on July 18, 2000. A copy of the '172 patent is attached as Exhibit C and is made a part of this Complaint.

11. Plaintiff APT is currently the assignee and sole owner of the patents-in-suit (and all worldwide counterparts), including without limitation all rights to sue for past, present and future infringement, including the right to collect and receive any damages, royalties or settlements for such infringements, all rights to sue for injunctive or other equitable relief, and any and all causes of action relating to any inventions of these patents.

**Brief Summary of the Technology**

12. Virtual memory is a memory management technique that allows a program to be designed as though there is only a single hardware memory device (*i.e.*, the "virtual" single memory device containing *logical* memory addresses) when, in fact, there may be a plurality of memory devices with portions of each supporting the program (*i.e.*, the physical memory devices containing *physical* memory addresses). Systems that employ virtual memory, among other things, may use physical memory more efficiently and render the programming of applications easier.

13. Computer operating systems that employ virtual memory typically contain a data processor that supports an address translation mechanism in order to translate a logical memory

address from the virtual memory (*e.g.*, when requested by a program) into a physical memory address from the physical memory. Such systems may do so by utilizing, among other things, a buffer memory, which may be known as a translation lookaside buffer (TLB).

14. Each of the patents-in-suit discloses data processors that achieve greater processing efficiency through novel and non-obvious improvements to data processor virtual memory structure and operation.

#### **INFRINGEMENT OF THE '978 PATENT**

15. Plaintiff realleges and incorporates herein by reference the allegations stated in paragraphs 1-14 of this Complaint.

16. Upon information and belief, NVIDIA has been and is now infringing, inducing infringement, and contributing to the infringement of the '978 patent in this District and elsewhere by making, using, selling, offering for sale, and/or importing devices, including without limitation, the Tegra 2 and Tegra 3, which contain ARM Cortex-A9 processors, or products containing the same, and other products with MMUs covered by one or more claims of the '978 patent, and/or contributing to or inducing the same by third-parties, all to the injury of APT.

17. Accordingly, NVIDIA has infringed and continues to infringe, either literally or under the doctrine of equivalents, one or more claims of the '978 patent without license or authority.

18. Plaintiff APT has suffered damages as a result of NVIDIA's infringement and will continue to suffer damages as a result of NVIDIA's infringement.

#### **INFRINGEMENT OF THE '354 PATENT**

19. Plaintiff realleges and incorporates herein by reference the allegations stated in paragraphs 1-14 of this Complaint.

20. Upon information and belief, NVIDIA has been and is now infringing, inducing infringement, and contributing to the infringement of the '354 patent in this District and elsewhere by making, using, selling, offering for sale, and/or importing devices, including without limitation, the Tegra 2 and Tegra 3, which contain ARM Cortex-A9 processors, or products containing the same, and other products with MMUs covered by one or more claims of the '354 patent, and/or contributing to or inducing the same by third-parties, all to the injury of APT.

21. Accordingly, NVIDIA has infringed and continues to infringe, either literally or under the doctrine of equivalents, one or more claims of the '354 patent without license or authority.

22. Plaintiff APT has suffered damages as a result of NVIDIA's infringement and will continue to suffer damages as a result of NVIDIA's infringement.

#### **INFRINGEMENT OF THE '172 PATENT**

23. Plaintiff realleges and incorporates herein by reference the allegations stated in paragraphs 1-14 of this Complaint.

24. Upon information and belief, NVIDIA has been and is now infringing, inducing infringement, and contributing to the infringement of the '172 patent in this District and elsewhere by making, using, selling, offering for sale, and/or importing devices, including without limitation, the Tegra 2 and Tegra 3, which contain ARM Cortex-A9 processors, or products containing the same, and other products with MMUs covered by one or more claims of the '172 patent, and/or contributing to or inducing the same by third-parties, all to the injury of APT.

25. Accordingly, NVIDIA has infringed and continues to infringe, either literally or under the doctrine of equivalents, one or more claims of the '172 patent without license or authority.

26. Plaintiff APT has suffered damages as a result of NVIDIA's infringement and will continue to suffer damages as a result of NVIDIA's infringement.

**DEMAND FOR JURY TRIAL**

Plaintiff APT demands a trial by jury on all issues so triable.

**PRAYER FOR RELIEF**

**WHEREFORE**, Plaintiff prays for judgment as follows:

- (a) that Defendant has infringed one or more claims of the '978 patent;
- (b) that Defendant has infringed one or more claims of the '354 patent;
- (c) that Defendant has infringed one or more claims of the '172 patent;
- (d) that Plaintiff be awarded damages from Defendant adequate to compensate for Defendant's infringement, but in no event no less than a reasonable royalty, as provided by 35 U.S.C. § 284;
- (e) that a reasonable royalty going forward be awarded for Defendant's future infringement, or in the alternative, that an injunction be issued against further infringement by Defendant and their directors, officers, agents, servants, employees, attorneys and all persons in active concert or participation with them; and
- (f) that Plaintiff be granted such other and further relief, in law or in equity, as the Court deems just and equitable.

Dated: March 23, 2012

Respectfully Submitted,

By: /s/ William E. Davis, III  
William E. Davis, III  
Texas State Bar No. 24047416  
THE DAVIS FIRM P.C.  
111 W. Tyler St.  
Longview, Texas 75601  
Telephone: (903) 230-9090  
Facsimile: (903) 230-9661  
Email: bdavis@bdavisfirm.com

David M. Farnum  
Ralph P. Albrecht  
Cameron H. Tousi  
ALBRECHT TOUSI & FARNUM PLLC  
1701 Pennsylvania Ave, NW Ste 300  
Washington, D.C. 20006  
Telephone: (202) 349-1490  
Facsimile: (202) 318-8788  
Email: chtousi@atfirm.com  
Email: dmfarnum@atfirm.com  
Email: rpalbrecht@atfirm.com

*ATTORNEYS FOR PLAINTIFF  
ADVANCED PROCESSOR  
TECHNOLOGIES LLC*