IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF WISCONSIN

WISCONSIN ALUMNI RESEARCH FOUNDATION a Wisconsin Corporation 614 Walnut Street Madison, Wisconsin 53726,)))))
Plaintiff,)
v.) Case No. 08-C-78-C
INTEL CORPORATION))
a Delaware Corporation)
2200 Mission College Boulevard)
Santa Clara, California 95054,)
Defendant.)
Defendant.)

AMENDED COMPLAINT

Plaintiff Wisconsin Alumni Research Foundation, by its undersigned counsel, for its complaint against defendant Intel Corporation, states as follows:

I. PARTIES

1. Plaintiff Wisconsin Alumni Research Foundation ("WARF") is a not for profit Wisconsin corporation having its principal place of business at 614 Walnut Street, Madison, Wisconsin 53726. WARF is the patent management organization for the University of Wisconsin. WARF's mission is to support research at the University of Wisconsin. WARF carries out this mission by patenting and licensing University

inventions and by returning the proceeds of that licensing to fund additional research at the University.

2. On information and belief, Intel Corporation ("Intel" or "Defendant") is a Delaware corporation which has its principal place of business at 2200 Mission College Boulevard, Santa Clara, California 95054.

II. <u>JURISDICTION AND VENUE</u>

- 3. Subject matter jurisdiction is based on 28 U.S.C. §§ 1331 and 1338, in that this action arises under the patent laws of the United States (35 U.S.C. §§ 1, *et seq.*).
- 4. This Court has personal jurisdiction over Intel under the Wisconsin "long-arm" statute (Wis. Stat. § 801.05) because Intel has purposefully directed activities at the State of Wisconsin and its residents, which activities gave rise to the cause of action.

 Moreover, Intel has engaged in substantial and not isolated activities in this district, including but not limited to having regular contacts with WARF and its designees.
- 5. Venue lies in this Court pursuant to 28 U.S.C. §§ 1391(b) and (c) and § 1400(b), as Intel is subject to personal jurisdiction, does business, and has committed acts of infringement in this district. Further under § 1391, a substantial part of the events giving rise to this claim occurred in this district, including but not limited to the development of the invention claimed in the patent that is the subject of this action and the prosecution of that patent, and because WARF resides in this district.

III. FACTUAL ALLEGATIONS

- 6. On July 14, 1998, the United States Patent and Trademark Office duly and legally issued United States Patent No. 5,781,752 (hereinafter "the '752 Patent") entitled "Table Based Data Speculation Circuit for Parallel Processing Computer" to Andreas Moshovos, Scott Breach, Terani Vijaykumar, and Gurindar Sohi. A true and correct copy of the '752 Patent is attached hereto as Exhibit A.
- 7. WARF is the owner of all rights, title and interest in the '752 Patent by assignment and thereby is authorized and has standing to bring legal action to enforce all rights arising under the '752 Patent.
- 8. The '752 Patent discloses and claims a data speculation circuit to facilitate the advanced execution of instructions before other instructions on which they may be data dependent, thus significantly enhancing the opportunities for instruction-level parallelism and thereby improving execution efficiency and speed, a pioneering invention that has been widely recognized as a significant advance in computer microprocessing both by researchers in the field and those in industry.
- 9. The invention disclosed and claimed in the '752 Patent was the result of the labor and ingenuity of the four named inventors of the '752 Patent, Drs. Moshovos, Breach, Vijaykumar and Sohi, at the University of Wisconsin.
- 10. The invention disclosed and claimed in the '752 Patent has been recognized by those in the art as a major milestone in the field of computer microprocessing. This work has been cited in numerous scholarly articles and in the classic, gold standard

textbook on computer architecture, Hennessy & Patterson's <u>Computer Architecture</u>, <u>A</u>

<u>Quantitative Approach</u> (Third Edition).

- 11. While the application for the '752 Patent was pending, one of the inventors on the patent, Dr. Gurindar Sohi, presented, among other research, the work that is the subject of the '752 Patent to individuals at Intel, informed them that patent protection was being sought on the work, and offered to facilitate discussions with WARF regarding licensing the technology to Intel should it wish to incorporate this new technology in its future products.
- 12. After the patent issued, Dr. Sohi and individuals from WARF continued to inform Intel of the '752 Patent and attempt to engage in discussions regarding licensing of the '752 Patent.
- 13. Intel refused attempts to license the technology claimed in the '752 Patent. Rather, Intel incorporated the work of Dr. Sohi and his co-inventors described in the '752 Patent into its planning of future products. Intel never informed Dr. Sohi that it was incorporating the patented technology into its products nor did it seek to license the invention from WARF.
- 14. To date, Intel has refused to enter into a license with WARF relating to the '752 Patent.

IV. COUNT ONE: INFRINGEMENT OF U.S. PATENT NO. 5,781,752

- 15. WARF incorporates the foregoing paragraphs of this Complaint.
- 16. Defendant has been, and currently is, making, using, selling, offering to sell, importing and/or exporting processors that infringe at least claims 1 and 2 of the '752 Patent, including all Intel processors based on or derived from the Intel CoreTM Microarchitecture or the enhanced Intel CoreTM Microarchitecture that incorporate or contain Intel's "Smart Memory Access" technology. Upon information and belief, such processors include the following:

Intel Processor Name	Intel Processor Numbers	
Desktop Processors		
Intel Core 2 Extreme Processors	QX9775, QX9770, QX9650, X9000, QX6850, QX6800, QX6700, X7900, X7800, X6800	
Intel Core 2 Quad Processors	Q9550, Q9450, Q9300, Q6700, Q6600	
Intel Core 2 Duo Processors	(Desktop) E8500, E8400, E8200, E8190, E6850, E6750, E6700, E6600, E6550, E6540, E6420, E6400, E6320, E6300, E4700, E4600, E4500, E4400, E4300 (Laptop) T9500, T9300, T8300, T8100, T7800, T7700, T7600, T7500, T7400, T7250, T7200, T7100, T5750, T5600, T5550, T5500, L7500, L7400, L7300, L7200, U7700, U7600, U7500	
Intel Pentium Dual-Core Processors	(Desktop) E2220, E2200, E2180, E2160, E2140 (Laptop) T2330, T2310, T2060	
Intel Celeron Processor	530, 540, 550, 560	
Intel Celeron Dual-Core Processor	E1000 series, T1x00 series	

Intel Processor Name	Intel Processor Numbers	
Notebook Processors		
Intel Core 2 Extreme Mobile processors	QX9775, QX9770, QX9650, X9000, QX6850, QX6800, QX6700, X7900, X7800, X6800	
Intel Core 2 Duo Mobile Processors	(Desktop) E8500, E8400, E8200, E8190, E6850, E6750, E6700, E6600, E6550, E6540, E6420, E6400, E6320, E6300, E4700, E4600, E4500, E4400, E4300 (Laptop) T9500, T9300, T8300, T8100, T7800, T7700, T7600, T7500, T7400, T7250, T7200, T7100, T5750, T5600, T5550, T5500, L7500, L7400, L7300, L7200, U7700, U7600, U7500	
Intel Core 2 Solo Mobile Processors	U2200, U2100	
Intel Centrino Processors & Intel Processors based on Centrino Processor Technology	L7000, T7000, U7000, T5000, T2000, U2000	
Intel Pentium Dual-Core Mobile Processor	(Desktop) E2220, E2200, E2180, E2160, E2140 (Laptop) T2330, T2310, T2060	
Intel Celeron Dual-Core Processor	T1400, E1200	
Intel Celeron Processor	530, 540, 550, 560	
Intel Celeron M Processor	530, 523, 520	
Server and WorkStation Pro	ocessors	
Intel Xeon Processor 7000 sequence	X7350, L7345, E7340, E7330, E7320, E7310, E7220, E7210, 7150N, 7140M, 7140N, 7130M, 7130N, 7120M, 7120N, 7110M, 7110N, 7041, 7040, 7030, 7020	
Intel Xeon Processor 5000 sequence	X5482, X5472, X5460, X5450, L5420, L5410, E5472, E5462, E5450, E5440, E5430, E5420, E5410, E5405, X5272, X5260, X5205, X5365, X5355, L5335, L5320,	

Intel Processor Name	Intel Processor Numbers
	L5310, E5345, E5335, E5320, E5310, 5160, 5150, 5148, 5140, 5130, 5120, 5110
Intel Xeon Processor 3000 sequence	X3360, X3350, X3320, E3110, X3230, X3220, X3210, 3085, 3075, 3070, 3065, 3060, 3050, 3040
Other Intel Processors	
Intel Nehalem Processors	All Intel processors based on or derived from the Nehalem Architecture
Intel processors associated with the following Intel code names	Penryn, Yorkfield, Wolfdale, Sossaman, Tigerton, Dunnington, Woodcrest, Clovertown, Conroe, Kentsfield and Merom

- 17. Defendant has been, and currently is, infringing at least claims 1 and 2 of the '752 Patent, in violation of 35 U.S.C. § 271 and all causes of action thereunder, by making, using, selling, offering to sell, importing and/or exporting, without license or authority from WARF, certain processors, including the processors described and listed in Paragraph 16 above, to the damage and injury of WARF.
- 18. Upon information and belief, the acts of infringement by Defendant are willful, intentional, and in conscious disregard of WARF's rights in the '752 Patent.
- 19. As a direct and proximate result of Defendant's infringement of the '752 Patent, WARF has been and will continue to be irreparably damaged and deprived of its rights secured by the '752 Patent due to the unlawful infringement by Defendant in amounts not yet determined for which WARF is entitled to relief.

V. JURY DEMAND

20. Pursuant to FED. R. CIV. P. 38(b), WARF requests a trial by jury.

VI. PRAYER FOR RELIEF

WHEREFORE, Wisconsin Alumni Research Foundation prays for relief as follows:

- A. A judgment that Defendant has infringed at least claims 1 and 2 of the '752 Patent;
- B. A judgment permanently enjoining and restraining Defendant and its subsidiaries, parents, officers, directors, agents, servants, employees, affiliates, attorneys and all others in active concert with them, from directly or indirectly infringing the '752 Patent;
- C. A judgment that Defendant's various acts of infringement have been in willful, knowing and deliberate disregard of WARF's patent rights and requiring Defendant to pay damages under 35 U.S.C. § 284, including treble damages for willful infringement, with interest;
- D. A judgment awarding WARF damages adequate to compensate for Defendant's infringement, and in no event less than a reasonable royalty for Defendant's acts of infringement;
- E. A judgment awarding damages to WARF for its costs, disbursements, expert witness fees, and attorneys' fees incurred in prosecuting this action, with interest, including damages for an exceptional case pursuant to 35 U.S.C. § 285 and as otherwise provided by law;
- F. A judgment awarding WARF pre-judgment and post-judgment interest on WARF's damages as allowed by law; and

G. Such other relief as the Court may deem just and equitable.

Dated this 16th day of May, 2008.

HELLER EHRMAN LLP

By: <u>s/ Michelle M. Umberger</u>

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