

**UNITED STATES OF AMERICA
BEFORE FEDERAL TRADE COMMISSION**

COMMISSIONERS: Robert Pitofsky, Chairman
Sheila F. Anthony
Mozelle W. Thompson
Orson Swindle

In the Matter of

INTEL CORPORATION,

a corporation.

DOCKET NO. 9288

COMPLAINT

Pursuant to the provisions of the Federal Trade Commission Act, and by virtue of the authority vested in it by said Act, the Federal Trade Commission, having reason to believe that Intel Corporation (“Intel”) has engaged in a pattern of conduct, as described herein, that violates Section 5 of the Federal Trade Commission Act, as amended, 15 U.S.C. § 45, and it appearing to the Commission that a proceeding in respect thereof would be in the public interest, hereby issues its complaint, stating its charges as follows:

A. The Respondent

1. Intel Corporation (“Intel”) is a corporation organized, existing, and doing business under and by virtue of the laws of the State of Delaware, with its office and principal place of business located at 2200 Mission College Boulevard, Santa Clara, California 95052. For the fiscal year ended December 31, 1997, Intel reported revenues of approximately \$25 billion and profits of approximately \$6.9 billion.

2. Intel designs, develops, manufactures, markets, and sells a variety of semiconductor products, including microprocessor devices. A microprocessor is the central processing unit of a computer system. Often described as the “brains” of a computer system, the microprocessor serves the essential functions of processing system data and controlling other devices integral to the system. Intel’s microprocessor products include a family of devices that are marketed and sold under the trade names Pentium, Pentium with MMX, Pentium Pro, and Pentium II (the “Pentium microprocessors”).

3. At all times relevant herein, Intel has been, and is now, a corporation as “corporation”

is defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. § 44; and at all times relevant herein, Intel has been, and is now, engaged in commerce as “commerce” is defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. § 44.

B. Intel Has Monopoly Power

4. One line of commerce relevant to Intel’s conduct is the manufacture and sale of all general-purpose microprocessors, including current-generation microprocessors. The relevant market also includes future-generation microprocessors and technologies for current-generation and future-generation microprocessors. In addition, narrower markets may be contained within the market for general-purpose microprocessors.

5. The relevant geographic market is the world.

6. Intel has monopoly power in the market for general-purpose microprocessors. Intel’s market dominance is reflected in its own market studies, which indicate that sales of Intel microprocessor products have accounted for approximately 80 percent of the total dollar sales of general-purpose microprocessors worldwide for each of the last five years.

7. Entry is difficult and unlikely to correct Intel’s monopoly power.

8. A new entrant would need to develop a relevant microprocessor product, requiring substantial capital expenditures and several years of engineering work. The entry cost required for developing a new high-performance microprocessor would likely exceed \$250 million. The development of a high-performance microprocessor product comparable to Intel’s current Pentium II device or the Alpha microprocessor products currently sold by Digital Equipment Corporation (“Digital”) would likely require at least four years. For example, although Intel began development of its new 64-bit Intel microprocessor architecture (known as “IA-64”) in 1994, the first generation IA-64 device known as Merced is not expected to be commercially available until the year 2000.

9. New entry is also deterred by the minimum viable scale requirements for a modern semiconductor fabrication facility. The cost of developing, building and equipping such a facility is approximately \$1.6 billion. An entrant could not expect to begin shipping revenue microprocessor products for at least four to five years after starting the construction of such a facility. A new entrant could avoid significant fixed costs in buildings or equipment by contracting with an existing microprocessor producer to provide manufacturing and development services, but even such “fabless” entry would require approximately six months and a commitment of approximately 30 staff to the manufacturing area at a cost of approximately \$200,000 per person per year, in addition to significant costs for foundry services.

10. A new entrant would also have to establish both product reputation and technical

compatibility with a computer operating system and the applications software desired by a significant number of computer users. Buyers of computer systems and microprocessor components demand highly reliable products, and regard product reputation to be an essential purchasing criterion. Consumers also demand computer systems and microprocessor components that are capable of running the computer operating systems and applications software programs that are desired by computer end-users. Accordingly, a new entrant must attract support from software developers, who are generally reluctant to devote development resources to an unproven microprocessor product for which there is no demonstrated demand. Furthermore, consumers typically have many existing software applications that were written for a particular microprocessor architecture; thus, it would often be costly for consumers to switch to a new and incompatible microprocessor architecture and computer systems manufacturers to switch and risk alienating such consumers. The need simultaneously to secure a large number of users in order to make the product attractive to software developers and to secure the efforts of software developers in order to make the product attractive to users is often referred to as “network effects.” The importance of these network effects is illustrated by Intel’s success in obtaining commitments from many computer manufacturers and software vendors to build computers and write software for Intel’s new 64-bit Merced microprocessor, even though the product will not be available for nearly two years.

C. Intel Refused to Deal With Certain Customers as a Means of Coercing Licenses to Their Rival Microprocessor Technology

11. As more fully set forth below in paragraphs 15-37, Intel has entrenched, and threatens to continue entrenching, its monopoly power in the relevant lines of commerce by, among other things, denying or threatening to deny technical information about Intel microprocessor products to Intel customers who have developed and patented innovations in microprocessor technology, as a means of coercing those customers into licensing their innovations to Intel.

12. Intel promotes and markets its microprocessors by providing customers with technical information about new Intel products in advance of their commercial release. Intel regards such advance technical information to be proprietary and provides it subject to formal nondisclosure agreements, which prohibit recipients from disclosing such information to any unauthorized person or from using it for any unauthorized purpose. Subject to such restrictions, however, Intel makes such information widely available to customers, including manufacturers of personal computers, workstations, and servers. Such relationships have substantial commercial benefits for both parties: Intel’s customers benefit because the advance technical information enables them to develop and introduce new computer products incorporating the latest microprocessor technology

related technology developed and owned by those customers. Intel's conduct threatened to injure, and did injure, the ability of those targeted customers to remain competitive in developing and bringing to market in a timely manner computer systems based on Intel microprocessors.

14. A natural and probable effect of Intel's conduct is to diminish the incentives of those three Intel customers -- as well as other firms that are Intel customers or otherwise commercially dependent upon Intel -- to develop new innovations relating to microprocessor technology. Intel's coercive business tactics effectively undermine the patent rights of such firms and reduce their incentives to develop new technologies relating to microprocessors. The nature and effects of Intel's conduct are illustrated, but not necessarily exhausted, by three cases described below in paragraphs 15-37.

1. Intel's Conduct Toward Digital Equipment Corporation

15. Digital Equipment Corporation ("Digital") is a corporation organized, existing, and doing business under and by virtue of the laws of the Commonwealth of Massachusetts, with its principal executive offices located at 111 Powdermill Road, Maynard, Massachusetts 01754. Digital designs, develops, manufactures, and sells computer hardware and software systems, including personal computers, workstations, and servers. For the fiscal year ended June 30, 1997, Digital reported worldwide sales of approximately \$13.7 billion.

16. Digital designs, develops, manufactures, markets, and sells computer system products that incorporate Intel microprocessors. Sales of Intel-based computers constitute a substantial part of Digital's business, accounting for approximately \$2 billion of Digital's revenues for 1997. Accordingly, Digital is a significant customer of Intel, having purchased approximately \$250 million worth of Intel microprocessors for each of the last few years. Intel also expects Digital to increase the volume of its microprocessor purchases over the next few years.

17. Digital also designs, develops, manufactures, markets, and sells some semiconductor products, including microprocessor products that are generally known, marketed, and sold under the trade name Alpha. Although they have only a small share of the market, Digital's Alpha microprocessors are technologically significant. Alpha microprocessors are widely regarded to be the highest performing general purpose microprocessors available, having performance superior to any of Intel's products in terms of accepted industry benchmarks for processor performance. When Intel engineers confirmed the performance of Digital's third generation Alpha product, they declared a "strategic emergency" and undertook to analyze the "miracles" of Alpha performance. Alpha also provides the only alternative microprocessor platform that competes with Intel's microprocessor architecture in running the Windows NT operating system. A current major goal for Intel is the development of its IA-64 microprocessor architecture to compete with Digital's current 64-bit Alpha architecture, and the development of Merced and other IA-64-based microprocessors to compete with Digital's Alpha devices.

18. In 1995 Intel introduced the Pentium Pro microprocessor, which closed some of the

substantial performance gap between Intel's Pentium microprocessors and Digital's Alpha microprocessors. After examining the Pentium Pro device, Digital concluded that Intel was using Digital microprocessor technology in violation of Digital's patent rights. On May 12, 1997, Digital sued Intel for patent infringement, alleging that Intel's Pentium microprocessors infringed ten Digital microprocessor patents.

19. Intel responded to Digital's lawsuit by publicly denying Digital access to any of the Intel technical information needed to continue developing in a timely and efficient manner new computer systems incorporating new Intel microprocessors. Among other things, Intel:

- Demanded return of technical information and refused to supply any additional technical information needed by Digital to design computer systems products incorporating Intel's newest microprocessors, even though that information was available to similarly situated computer manufacturers that buy microprocessors from Intel, and even though Intel had no reasonable belief that Digital had ever misused, could misuse, or would misuse that information;
- Demanded return of microprocessor prototypes and refused to supply additional prototypes, even though such prototypes were available to similarly situated computer manufacturers that buy microprocessors from Intel, and even though Intel had no reasonable belief that Digital had misused, could misuse, or would misuse Intel's prototypes;
- Acted to create uncertainty about Digital's future source of supply of Intel

2. Intel's Conduct Toward Intergraph Corporation

22. Intergraph Corporation ("Intergraph") is a Delaware corporation headquartered in Huntsville, Alabama. Intergraph develops, manufactures, markets, and sells computer hardware and software products. Intergraph's flagship products are computer workstations designed for sophisticated graphics applications such as computer-aided design, computer-aided engineering, computer-aided manufacturing, computer-aided animation, and other computer graphics, multimedia and digital media functions.

23. In 1987, Intergraph purchased the Advanced Processor Division of Fairchild Industries, which had developed a family of microprocessor devices known by the trade name Clipper. Until 1993, Intergraph continued to develop Clipper microprocessor technology for use in Intergraph's computer systems.

24. Beginning in late 1992, however, Intergraph shifted its focus away from Clipper-based computer systems and became one of the first computer manufacturers to develop a family of workstations and servers based on Intel's Pentium microprocessor and Microsoft's Windows NT operating system. As an early adopter of Intel's microprocessor architecture for workstations, Intergraph provided Intel with feedback that was essential for Intel's penetration of the workstation market and otherwise validated the use of Intel's products (and their use in Windows NT-based workstations) for what was at the time a new market segment for Intel. Intergraph became the first computer systems manufacturer to offer a workstation based on Intel's Pentium Pro microprocessor, and the first to offer a single- and dual-processor 3D graphics workstation based on Intel's microprocessors.

25. By 1994, Intel-based systems represented nearly three-quarters of Intergraph's hardware unit sales, and this figure had increased to 100 percent in 1996. Over the years, Intergraph has designed many new computer systems based on new Intel microprocessors that have proved to be popular with consumers. Intergraph was the leading seller in revenue of Windows NT workstations for the first quarter of 1997.

26. In 1996, Intel demanded a royalty-free license to Intergraph's Clipper microprocessor technology as a condition for Intergraph continuing to receive technical information that Intergraph required to continue developing Intel-based workstations in a timely and efficient manner.

27. When Intergraph said it could not agree to such a demand, Intel refused to provide Intergraph with important information relating to graphics technology, contributing, along with subsequent Intel conduct, to a significant delay of Intergraph's development of a graphics workstation.

28. In 1997, Intergraph began asserting that certain third parties using Intel-based computer technology were infringing certain Intergraph patents. When some of those

manufacturers in turn sought indemnification from Intel against Intergraph's claims for patent infringement, Intel increased pressure to force Intergraph to grant Intel a royalty-free license to Intergraph's microprocessor-related patents.

29. When Intergraph again refused, Intel cut off Intergraph's access to any of the Intel technical information necessary to continue developing in a timely and efficient manner new computer systems incorporating new Intel microprocessors. Among other things, Intel:

- Cut off technical information that Intergraph needed in order to design systems based on Intel's newest chips, even though that technical information was widely available to similarly situated computer manufacturers that purchase Intel microprocessors, and even though Intel had no reasonable belief that Intergraph had misused, could misuse, or would misuse Intel's technical information;
- Demanded return of microprocessor prototypes and refused to supply additional prototypes, even though such prototypes were widely available to similarly situated computer manufacturers that purchase chips from Intel, and even though Intel had no reasonable belief that Intergraph had misused, could misuse, or would misuse Intel's prototypes;
- Failed to inform Intergraph of a bug Intel had previously discovered in an Intel chip that Intergraph was purchasing, and interfered with Intergraph's efforts to seek assistance from a third party after Intergraph discovered the bug. As a result, Intergraph was forced to redesign, refabricate and retest an entire motherboard, which caused significant product delays;
- Acted to create uncertainty about Intergraph's future source of supply of Intel microprocessors; and
- Otherwise engaged in conduct to create a perception in the computer industry that Intergraph was no longer capable of bringing to market in a timely manner new computer system products that incorporate Intel's latest microprocessor technology. Because product life cycles for computer systems can be as short as six months, any delay in the introduction of a new product can have a significant adverse effect on the commercial prospects for that product.

30. Intel's conduct as described in paragraphs 26 through 29 was not reasonably necessary to serve any legitimate, procompetitive purpose.

31. The conduct described in paragraphs 26 through 29 had a significant adverse impact on Intergraph's ability to develop and bring to market in a timely manner computer systems based on Intel microprocessors, and would pose an even more significant long-term threat to Intergraph's business if a United States District Court had not issued a preliminary injunction in

April 1998 enjoining Intel from engaging in such conduct.

3. Intel's Conduct Toward Compaq Computer Corporation

32. Compaq Computer Corporation ("Compaq"), a Delaware corporation headquartered in Houston, Texas, is the largest manufacturer of personal computers in the world. Compaq designs, develops, manufactures, and sells a full line of computer system products, including personal computers, workstations, and servers. Compaq reported revenues of approximately \$24.6 billion for the fiscal year ended December 31, 1997.

33. Compaq designs, develops, manufactures, markets, and sells computer system products that incorporate Intel microprocessors. Such Intel-based computers constitute a significant part of Compaq's business, accounting for the majority of Compaq's revenues. Compaq is Intel's largest dollar and volume customer for microprocessor products, having purchased more than \$2 billion worth of Intel microprocessors during 1997.

34. In November 1994, Compaq sued another computer systems manufacturer, Packard Bell Electronics, Inc. (now Packard Bell NEC, Inc.) for using patented Compaq technology in Packard Bell computer systems. Intel, the supplier of the infringing components, intervened on Packard Bell's side, because Intel believed that it had an obligation to indemnify Packard Bell.

35. In response to Compaq's assertion of its intellectual property rights, Intel cut off technical information that Compaq needed in order to design systems based on Intel's newest chips, even though that technical information was widely available to similarly situated computer manufacturers that purchase Intel microprocessors, and even though Intel had no reasonable belief that Compaq had misused, could misuse, or would misuse Intel's technical information.

36. Intel's conduct as described in paragraph 35 was not reasonably necessary to serve any legitimate, procompetitive purpose.

37. The conduct described in paragraph 35 had a significant adverse effect on Compaq's ability to develop and bring to market in a timely manner computer systems based on Intel microprocessors, and would have posed an even more significant long-term threat to Compaq's business if Compaq had not agreed to license its technology to Intel.

D. Elements of Violations of Law

38. As set forth in paragraphs 4-10, Intel has monopoly power in the market for general-purpose microprocessors and in narrower markets contained therein.

39. As set forth in paragraphs 11-37, Intel has engaged in exclusionary conduct by cutting

off and threatening to cut off valuable commercial relationships with certain of its customers as a means of coercing licenses to their patent rights in rival microprocessor and related technologies. In each instance, Intel's conduct had a significant adverse effect on the ability of the targeted customer to develop and bring to market in a timely manner computer systems based on Intel microprocessors, and would have posed a more significant long-term threat to the businesses of those customers if they had not agreed to license their technologies to Intel or, in the case of Intergraph, won an injunction against Intel's conduct. Because patent rights are an important means of promoting innovation, Intel's coercive tactics to force customers to license away such rights diminishes the incentives of any firm dependent on Intel to develop microprocessor-related technologies. Because most firms who own or are developing such technologies are vulnerable to retaliation from Intel, the natural and probable effect of Intel's conduct is to diminish the incentives of the industry to develop new and improved microprocessor and related technologies. Consequently, Intel's conduct entrenches its monopoly power in the current generation of general-purpose microprocessors and reduces competition to develop new microprocessor technology and future generations of microprocessor products.

40. Intel has willfully maintained its monopoly power in the general-purpose microprocessor market, and narrower markets contained therein, through exclusionary conduct that was not reasonably necessary to serve any legitimate, procompetitive purpose.

41. Intel also had the specific intent to attempt to monopolize both the current generation and future generations of general-purpose microprocessors, and narrower markets contained therein, and its actions create a dangerous probability that it will accomplish these objectives.

E. Violations of Law

42. Intel's conduct constitutes unlawful monopolization, unlawful attempts to monopolize, and unfair methods of competition, all in violation of Section 5 of the Federal Trade Commission Act.

NOTICE

Notice is hereby given to the respondent that July 10, 1998, at 10:00 o'clock a.m., or such later date as determined by an Administrative Law Judge of the Federal Trade Commission, is hereby fixed as the time and Federal Trade Commission, 6th and Pennsylvania Ave., N.W., Washington, D.C. 20580 as the place when and where a hearing will be had before an Administrative Law Judge, on the charges set forth in this complaint, at which time and place you will have the right under said Act to appear and show cause why an order should not be entered requiring you to cease and desist from the violations of law charged in the complaint.

You are notified that the opportunity is afforded you to file with the Commission an answer to this complaint on or before the twentieth (20th) day after service of it upon you. An answer in which the allegations of the complaint are contested shall contain a concise statement of the facts constituting each ground of defense; and specific admission, denial, or explanation of each fact alleged in the complaint or, if you are without knowledge thereof, a statement to that effect.

NOTICE OF CONTEMPLATED RELIEF

Should the Commission conclude from the record developed in an adjudicative proceeding in this matter that the respondent is in violation of Section 5 of the Federal Trade Commission

rights concerning computer technology against respondent;

- (2) has refused to license computer technology to respondent; or,
 - (3) has otherwise refused to accede to terms or conditions in the license or sale of property demanded by respondent.
2. Respondent shall mail to each of its customers and to each of its employees who have the authority to enter into agreements concerning sales, service, and technology development a copy of the Commission's complaint and order in this matter, along with a letter from respondent's chief executive officer stating that it will abide by the terms of this order.
 3. Respondent shall take such other measures that are appropriate to correct or remedy, or prevent the recurrence of, the anticompetitive practices engaged in by respondent.

WHEREFORE, THE PREMISES CONSIDERED, the Federal Trade Commission on this eighth day of June, 1998, issues its complaint against respondent.

By the Commission, Commissioner Swindle dissenting.

Donald S. Clark
Secretary