IN THE MATTER OF

DIGITAL EQUIPMENT CORPORATION

CONSENT ORDER, ETC., IN REGARD TO ALLEGED VIOLATION OF SEC. 7 OF THE CLAYTON ACT AND SEC. 5 OF THE FEDERAL TRADE COMMISSION ACT

Docket C-3818. Complaint, July 14, 1998--Decision, July 14, 1998

This consent order, in conjunction with Digital's sale of certain semiconductor business assets to Intel Corporation, requires, among other things, Digital to enter into or extend certain licensing agreements with Advanced Micro Devices, Inc., and Samsung Electronics Co., Ltd., or other Commission-approved licensees, and to begin the process of certifying International Business Machines, Inc. or other Commission-approved companies to manufacture Digital's Alpha microprocessor devices.

Participants

For the Commission: *Robert Cook, John Horsley, Joseph Krauss, William Baer, David Meyer, Jay Creswell,* and *Jonathan Baker.*

For the respondent: *Benjamin Crisman, Jr., Skadden, Arps, Slate, Meagher & Flom*, Washington, D.C. and *Michael Weiner, Skadden, Arps, Slate, Meagher & Flom*, New York, N.Y.

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 an agreement between Intel Corporation and Digital Equipment Corporation whereby Intel will acquire certain assets of Digital Equipment Corporation violates Section 7 of the Clayton Act, as amended, 15 U.S.C. 18, and 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. Respondent 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.

2. Digital is an international corporation with worldwide sales of approximately $13 billion in 1997. Digital designs, develops, manufactures, markets, and sells computer hardware and software systems, including personal computers, workstations, and servers. Digital also designs, develops, manufactures, markets, and sells a variety of semiconductor products, including certain microprocessor products that are generally known, marketed, and sold under the trade name Alpha.

3. At all times relevant herein, Digital 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, Digital 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. THE PROPOSED TRANSACTION

4. 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. Intel has annual worldwide sales of approximately $20.8 billion.

5. Intel designs, develops, manufactures, markets, and sells a variety of semiconductor products, including a line of microprocessor products that are generally known, marketed, and sold under the trade names Pentium, Pentium with MMX, Pentium Pro, and Pentium II (the "Pentium microprocessors").

6. Digital and Intel are currently litigating three pending lawsuits involving intellectual property and technology rights relating to microprocessors. Digital initiated that litigation on May 12, 1997, by filing a lawsuit in Massachusetts alleging that Intel has willfully infringed ten Digital patents by making and selling Pentium microprocessors. On May 27, 1997, Intel filed a related lawsuit in California alleging that Digital breached certain contractual duties

and violated Intel's trade secret rights by refusing to return certain technical information about Intel microprocessors. In August and September 1997, Intel filed counterclaims in Digital's Massachusetts lawsuit and a lawsuit in Oregon alleging that Digital willfully infringed fifteen Intel patents by, among other things, making and selling Alpha microprocessors.

7. On October 26, 1997, Digital and Intel executed a proposed Settlement Agreement, which provides for, among other things, the settlement of all pending litigation between Digital and Intel, the cross licensing of Intel and Digital patents for a period of ten (10) years, the sale of Digital's semiconductor business and operations to Intel, the establishment of contractual relationships pursuant to which Intel will serve as an Alpha microprocessor foundry for Digital and supply Alpha microprocessors to Digital, the retention by Digital of all intellectual property rights relating to Alpha microprocessor architecture and technology, and the retention by Digital of those Digital employees supporting the design and development of Alpha products. Since the execution of the Settlement Agreement, Digital and Intel have negotiated all of the subsidiary agreements that are contemplated by, and intended to implement the terms of, the Settlement Agreement (the "Implementing Agreements").

8. The proposed Settlement Agreement and Implementing Agreements provide, among other things, that Digital shall sell, and Intel shall acquire, Digital's semiconductor business and operations, including the facilities and manufacturing assets now used by Digital to produce Digital semiconductor products, including Alpha microprocessors. The proposed Settlement Agreement and Implementing Agreements require Intel to produce and supply exclusively to Digital Alpha microprocessor products for a period of seven (7) years from the closing date of the transactions contemplated by those Agreements, but do not restrict Digital's rights to establish or further develop any relationship or relationships with other semiconductor manufacturers to produce Alpha microprocessor devices, as a foundry for Digital or otherwise. In connection with the proposed Settlement Agreement, Digital also agreed to announce that it would support Intel's forthcoming IA-64 microprocessor devices by building computer systems designed around such devices.

9. The proposed Settlement Agreement and Implementing Agreements further provide, among other things, that Intel shall hire,

and Digital shall facilitate and encourage Intel's efforts to hire, all current employees of the Digital semiconductor business, with the exception of those Digital employees who currently support the design and development of Alpha microprocessor products. Among the Digital personnel to be hired by Intel under the Settlement Agreement are those Digital employees who currently conduct or support Digital's efforts to market and sell the Digital semiconductor product line, including Alpha microprocessor products, to the merchant market for semiconductor devices.

10. The proposed Settlement Agreement and Implementing Agreements further provide that Digital shall retain ownership of all intellectual property and technology rights relating to Alpha microprocessor architecture and devices, and contemplate that Digital will continue to develop the Alpha architecture and future generations of Alpha microprocessor products. Those Agreements also expressly give Digital the right to license Alpha intellectual property or technology rights to third parties, and do not prevent Digital from augmenting or establishing strategic alliances with third parties for the development of Alpha microprocessor technology.

C. THE RELEVANT MARKETS

11. One relevant line of commerce in which to analyze the likely competitive effects of the proposed Settlement Agreement is the manufacture and sale of high-performance, general-purpose microprocessors that are capable of running the computer operating system software in native mode that is currently being developed and sold by Microsoft Corporation ("Microsoft") under the trade name Windows NT.

12. A second relevant line of commerce in which to analyze the likely competitive effects of the proposed Settlement Agreement is the manufacture and sale of all general-purpose microprocessors.

13. A third relevant line of commerce in which to analyze the likely competitive effects of the proposed Settlement Agreement is innovation in the design and development of high-performance, general-purpose microprocessors.

14. The relevant geographic market in which to analyze the likely competitive effects of the proposed Settlement Agreement is the world.

D. CONCENTRATION

15. Intel has market power in the market for the supply of high-performance, general-purpose microprocessors that are capable of running the Windows NT operating system. Intel accounts for nearly 90 percent of dollar sales and nearly 85 percent of unit sales of such microprocessors. Digital accounts for approximately one percent of the dollar sales and unit sales of such devices. Moreover, Alpha microprocessors and Intel Pentium products are today the two closest substitutes -- and perhaps the only two viable devices -- available for computer system manufacturers and computer users who require a microprocessors capable of running in native mode the Windows NT operating systems.

16. Intel also has market power in the market for all general-purpose microprocessors. Intel accounts for nearly 90 percent of dollar sales and 80 percent of unit sales of general-purpose microprocessors. Digital accounts for approximately one percent of dollar sales and unit sales of such devices. No firm other than Intel accounts for more than four percent of dollar sales of microprocessors, and no firm other than Intel accounts for more than 10 percent of unit sales of microprocessors.

17. Digital and Intel are two of the most significant innovation competitors in the design and development of high-performance microprocessors. Even with its comparatively small share of the relevant markets, Digital's Alpha microprocessor represents the greatest technological challenge to Intel, and stands as the most significant threat to Intel's continued market dominance. For the last several years Digital's Alpha devices have consistently demonstrated industry-leading performance as measured by processing speed and related performance criteria generally recognized in the industry. Intel recognizes that the Alpha microprocessor has superior performance characteristics, poses a competitive threat to Intel's products, and establishes performance benchmarks that serve as goals to which Intel aspires in the development of its own future microprocessor products. Indeed, a current major goal for Intel is the development of a new 64-bit Intel microprocessor architecture (known as IA-64) to compete with Digital's current 64-bit Alpha architecture, and the development of new IA-64-based microprocessors (currently known by project names such as Merced and McKinley) to compete with Digital's Alpha devices.

E. ENTRY CONDITIONS

18. Entry into the relevant markets would not be sufficiently timely or likely to deter or otherwise correct the anticompetitive effects of the proposed Settlement Agreement.

19. A new entrant would need to develop a relevant microprocessor product, which development requires 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 such a product would require a minimum of two years, and a high-performance microprocessor comparable to Digital's Alpha microprocessors and Intel's Pentium products would likely require at least four years. For example, although Intel began development of its new IA-64 microprocessors in 1994, the first generation IA-64 device known as Merced is not expected to be commercially available before the second half of 1999.

20. New entry into the relevant markets 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 $200,000 per person per year, in addition to significant costs for foundry services.

21. 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. 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 recent 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 more than a year.

22. In order to enter the market for Windows NT-compatible microprocessors or the market for general-purpose microprocessors, any viable new microprocessor product must be compatible with the Windows NT operating system. Two other microprocessor architectures once enjoyed Windows NT support, but Windows NT support for those rival architectures was recently discontinued because of low system volumes. Any new entrant would likely need a very large volume of system sales in order to succeed in obtaining Windows NT support for the new microprocessor architecture.

F. EFFECTS OF THE PROPOSED TRANSACTION ON COMPETITION

23. Unless remedied, the proposed acquisition by Intel of Digital's semiconductor business and operations, including the facilities and assets used for microprocessor manufacturing, and of Digital's semiconductor sales and marketing organization, is likely to create uncertainty regarding the future competitive viability of Alpha and thereby maintain and enhance Intel's market power and thereby increase price and reduce quality and innovation in each of the relevant markets described above in paragraphs 11-14, for reasons that include, but are not limited to, the following:

a. By making it less likely that Digital would maintain the sales force to continue "merchant market" sales of Alpha microprocessors and other products to other OEMs, it would reduce competition between Intel and Digital for such sales; and

b. Putting Digital's supply of Alpha solely in the hands of Intel would give Intel the opportunity to delay production of Alpha microprocessors, impede the development of new generations of

Alpha microprocessors, and otherwise undermine the competitiveness of Alpha.

G. VIOLATIONS CHARGED

24. The agreement between Digital and Intel, if consummated, would violate Section 5 of the Federal Trade Commission Act, as amended, 15 U.S.C. 45, and Section 7 of the Clayton Act, as amended, 15 U.S.C. 18.

DECISION AND ORDER

The Federal Trade Commission ("Commission"), having initiated an investigation of the proposed transaction through which Intel Corporation ("Intel") is to acquire certain assets of Digital Equipment Corporation ("Digital"), including the semiconductor fabrication facility at which Digital manufactures its Alpha family of microprocessors; and Digital having represented to the Commission its plans to continue developing and promoting Alpha microprocessors despite the sale of the microprocessor facility; and Digital having licensed Samsung Electronics Co., Ltd. to develop, manufacture and sell Alpha microprocessors and having entered into a Memorandum of Understanding with Advanced Micro Devices, Inc., that contemplates a comparable license; and it now appearing that Digital, sometimes referred to as the "respondent," is willing to enter into an agreement containing an order in order to confirm its future plans for Alpha and to provide for other relief, and respondent having been furnished with a copy of a draft complaint that the Bureau of Competition has presented to the Commission for its consideration and which, if issued by the Commission, would charge respondent with violations of the Clayton Act and Federal Trade Commission Act; and

The respondent, its attorneys, and counsel for the Commission having thereafter executed an agreement containing a consent order, an admission by respondent of all the jurisdictional facts set forth in the aforesaid draft of complaint, a statement that the signing of said agreement is for settlement purposes only and does not constitute an admission by respondent that the law has been violated as alleged in such complaint, and waivers and other provisions as required by the Commission's Rules; and

The Commission, having thereafter considered the matter and having determined that it had reason to believe that the respondent has violated the said Acts, and that a complaint should issue stating its charges in that respect, and having thereupon accepted the executed consent agreement and placed such agreement on the public record for a period of sixty (60) days, now in further conformity with the procedure prescribed in Section 2.34 of its Rules, makes the following jurisdictional findings and enters the following order:

1. Respondent Digital is a corporation organized, existing, and doing business under and by virtue of the laws of the Commonwealth of Massachusetts, with its office and principal place of business located at 111 Powdermill Road, Maynard, Massachusetts.

2. The Federal Trade Commission has jurisdiction of the subject matter of this proceeding and of the respondent, and the proceeding is in the public interest.

ORDER

I.

It is ordered, That, as used in this order, the following definitions shall apply:

A. "*Respondent*" or "*Digital*" means Digital Equipment Corporation, its directors, officers, employees, agents and representatives, predecessors, successors, and assigns; its subsidiaries, divisions, groups and affiliates controlled by Digital Equipment Corporation and the respective directors, officers, employees, agents, representatives, successors, and assigns of each.

B. "*Intel*" means Intel Corporation, 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.

C. "*AMD*" means Advanced Micro Devices, Inc., 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 One AMD Place, P.O. Box 3453, Sunnyvale, California.

D. "*IBM*" means International Business Machines, Inc., 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 1 New Orchard Road, Armonk, New York.

E. "*Samsung*" means Samsung Electronics Co., Ltd., a Korean corporation with offices located at San #24, Nongaeo-Lee, Kiheung-Eup, Yonginn-Si, Kyungki-Do, Korea.

F. "*Digital's Alpha RISC Architecture*" means the architecture as defined by the current edition, or previous edition, of Digital's Alpha AXP Architecture Reference Manual, published by or on behalf of Digital.

G. "*Digital Alpha Implementation*" means a microprocessor implementation of Digital's Alpha RISC Architecture designed by or for Digital. For purposes of illustration only and without limiting the foregoing, each of the following implementations constitutes a distinct and separate Digital Alpha Implementation: EV4, EV5, EV6, EV67, EV68, EV7.

H. "*Alpha Device*" means a 64-bit microprocessor that implements the same design and circuitry as, and is equivalent in form, fit and function to, a Digital Alpha Implementation, and that 1) conforms to Digital's Alpha RISC Architecture, 2) executes Digital's Alpha instruction set and 3) meets appropriate Digital quality and branding criteria.

I. "*Device Specifications*" means the product specifications for a Digital Alpha RISC Architecture implementation from and after EV56 (*e.g.*, EV56, EV6, EV67, EV68, EV7, etc.), as set forth in the Device Data Sheet and the Device Quality and Reliability Data Sheet to be provided by Digital as amended from time to time, which define the specific functional, performance, electrical, timing, mechanical, environmental, reliability, and other requirements of the Digital Device and which may refer to, and thereby incorporate, other specifications, including without limitation, logic or other design and/or layout specifications.

J. "*Digital Device*" means a semiconductor integrated circuit device meeting the applicable Device Specification and embodying the applicable specific logic design of Digital's Alpha RISC Architecture implementation for EV56, EV6 and for any Future Alpha Implementation as designed and manufactured by or on behalf of Digital.

K. "*Future Alpha Implementation*" means a semiconductor integrated circuit device meeting the applicable Device Specification

and embodying the applicable specific logic design of a Digital Alpha RISC Architecture implementation beyond EV56 and EV6 (*e.g.*, EV67, EV68, EV7, etc.) as designed and manufactured by or on behalf of Digital.

L. "*AMD Device*" means a 64-bit microprocessor designed by or for AMD that 1) conforms to Digital's Alpha RISC Architecture, 2) executes Digital's Alpha instruction set and 3) meets appropriate Digital quality and branding criteria.

M. "*AMD Derivative*" means a 64-bit microprocessor derived from an Alpha Device or AMD Device, that incorporates a modification or improvement designed by or for AMD and 1) conforms to Digital's Alpha RISC Architecture, 2) executes Digital's Alpha instruction set and 3) meets appropriate Digital quality and branding criteria.

N. "*AMD Licensed Products*" means integrated circuits designed by or for AMD including, but not limited to Alpha Devices, AMD Devices and AMD Derivatives. AMD Licensed Products shall exclude SPARC, PA RISC, POWER PC and MIPS families of microprocessors.

O. "*AMD 64-bit Microprocessor*" means an AMD Licensed Product that is a 64-bit microprocessor.

P. "*Samsung Device*" means a fully qualified, packaged and tested semiconductor integrated circuit, that 1) is based upon and conforms to and incorporates Digital's Alpha RISC Architecture, 2) embodies a specific logic design provided to Samsung by Digital corresponding to the Digital Device, including updates by Digital thereto, and 3) conforms to the Device Specification, Branding Standard and Product Qualification Procedures.

Q. "*Samsung Alpha Architecture Device*" means a microprocessor manufactured and designed by or on behalf of Samsung and that 1) conforms to Digital's Alpha RISC Architecture, as specified in Digital's Alpha Architecture Reference Manual, as revised from time to time by Digital, 2) executes Digital's Alpha instruction set, and 3) conforms to the Branding Standard and Product Qualification Procedures.

R. "*Samsung Derivative*" means a semiconductor integrated circuit device embodying the design of Digital's EV56 or EV6 Alpha RISC Architecture implementation (or any Future Alpha Implementation licensed to Samsung) as the case may be, including

updates made thereto by Digital and updates made thereto by Samsung to a Samsung Device, and with such additions, deletions, modifications, improvements and redesigns made by Samsung to a Samsung Device including, but not limited to, design package, testing or die size changes, as result in a final device having any of the following changes (but no other changes) to a Samsung Device:

(i) Change in die size due to mask size change and/or due to employing any CMOS process technology;

(ii) Modification, reduction, addition, or replacement of SRAM cell;

(iii) Change or redesign of cache memory architecture, including necessary implementation to change I/O interfaces; .

(iv) Change to form, fit or function of the EV56 or the EV6 Device Specification other than changes or modifications to the EV6 or EV56 "core," which, for purposes of this subsection shall be defined to mean the Samsung Device, excluding the I/O pad ring and caches; and/or

(v) Any change to the Alpha RISC Architecture, or any change not included in (i), (ii), (iii) or (iv) above, to the Device Specification, Product Qualification Procedures or the form, fit or function of the EV56 or EV6 Device Specification, in either case, which has been specifically approved by Digital in its sole discretion, in accordance with the provisions of Section 3.3 (b)(ii) of the Samsung License Agreement referred to in paragraph III.A. of this order.

S. "*Alpha Microprocessor Technology*" means the information, materials, and technology relating to any Digital Alpha Implementation and associated Alpha architectural specification including, but not limited to, layout database and schematics, test programs and vectors, models, design data simulation results, all HAL, PAL, and BIOS codes, design documentation and customer product documentation, and including all updates.

T. "*Software Products*" means Digital commercial software products necessary to generate or optimize binary code for Digital Alpha Implementations.

U. "*CAD Tools*" means Digital CAD Tools, including all updates, applicable to the design, development and manufacture of Digital Alpha Implementations.