

Complaint

120 F.T.C.

IN THE MATTER OF

SILICON GRAPHICS, INC.

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-3626. Complaint, Nov. 14, 1995--Decision, Nov. 14, 1995

This consent order, among other things, permits the California-based corporation to acquire two entertainment graphics software firms, and requires the respondent to take certain steps, such as requiring that the respondent enter into a Commission-approved porting agreement with a Commission-approved porting partner in order to ensure that other companies that develop and sell entertainment graphics software and hardware can compete.

Appearances

For the Commission: *Howard Morse, Rhett R. Krulla and Eric D. Rohlck.*

For the respondent: *Wayne D. Collins, Jessica Skapof and Jill Ross, Shearman & Sterling, New York, N.Y.*

COMPLAINT

Pursuant to the provisions of the Federal Trade Commission Act, and of the Clayton Act, and by virtue of the authority vested in it by said Acts, the Federal Trade Commission ("Commission"), having reason to believe that respondent Silicon Graphics, Inc., a corporation, has agreed to acquire Alias Research Inc. and Wavefront Technologies, Inc., in violation of Section 5 of the Federal Trade Commission Act, as amended, 15 U.S.C. 45, and that such acquisition, if consummated, would violate 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:

I. RESPONDENT

1. Respondent Silicon Graphics, Inc. ("SGI") is a corporation organized, existing and doing business under and by virtue of the laws of the State of Delaware, with its principal place of business at 2011 North Shoreline Boulevard, Mountain View, California. SGI, which had total revenues of approximately \$1.4 billion in 1994, designs and supplies a family of workstation, server and supercomputer systems. SGI develops and markets, among other things, computer hardware incorporating interactive three-dimensional ("3D") graphics, digital media and multiprocessor supercomputing technologies.

II. ACQUIRED PARTIES

2. Alias Research Inc. ("Alias"), which had sales of approximately \$38 million in 1994, is a leading producer of workstation-based 3D and two-dimensional ("2D") computer graphics software for professional entertainment and industrial customers. Users of Alias' products in the entertainment industry create 3D computer graphic special effects, which may be output to a variety of media, including film and video for use in movies, television, interactive computer games, and other forms of presentation. Alias 3D products for the entertainment industry include Animator™ and PowerAnimator™.

3. Wavefront Technologies, Inc. ("Wavefront"), which had sales of approximately \$27.6 million in 1994, is a full-line producer of workstation-based 3D and 2D computer graphics software for professional entertainment and industrial customers. Users of Wavefront's products in the entertainment industry create 3D computer graphic special effects, which may be output to a variety of media, including film and video for use in movies, television, interactive computer games, and other forms of presentation. Wavefront's 3D products for the entertainment industry include, among others, Explore™, Kinemation™, and Dynamation™.

III. JURISDICTION

4. SGI is, and at all times relevant herein has been, engaged in commerce as "commerce" is defined in Section 1 of the Clayton Act, as amended, 15 U.S.C. 12, and is a corporation whose business is in

or affects commerce as "commerce" is defined in Section 4 of the Federal Trade Commission Act, as amended, 15 U.S.C. 44.

IV. THE PROPOSED ACQUISITIONS

5. SGI and Alias, and SGI and Wavefront, entered into agreements on or about February 6, 1995, pursuant to which SGI intends to acquire essentially all of the stock of Alias and Wavefront in exchange for SGI stock. At that time, the value of the Alias acquisition was approximately \$367 million, and the value of the Wavefront acquisition was approximately \$130 million. Each transaction is conditioned upon the closing of the other transaction.

V. THE RELEVANT MARKETS

6. One relevant line of commerce in which to analyze the effects of the proposed acquisitions is the development, production and sale of entertainment graphics workstations. Entertainment graphics workstations generally are UNIX-based computers with high-speed graphic capability and suitable for use with entertainment graphics software. Personal computers, including Intel-based PCs and Apple MacIntosh computers, are not adequate substitutes for entertainment graphics workstations as platforms for running entertainment graphics software.

7. Another relevant line of commerce in which to analyze the effects of the proposed acquisitions is the development, production and sale of entertainment graphics software. Entertainment graphics software consists of compatible modelling, animation, rendering, compositing and painting software tools for use on entertainment graphics workstations in the production of high-resolution, 2D and 3D digital images for film, video, electronic games, interactive programming, or other entertainment or educational, graphic media.

8. Two relevant geographic areas within which to analyze the likely effects of the Alias and Wavefront acquisitions are the United States and the world. There are no significant impediments to the import into the United States, or to the export from the United States, of entertainment graphics software.

VI. MARKET STRUCTURE

9. The entertainment graphics workstation market is extremely concentrated. SGI is the dominant provider of entertainment graphics workstations, with over 90% of the market. Although various other companies manufacture workstations, most entertainment graphics software was developed for use on SGI workstations and is available only for SGI workstations.

10. The entertainment graphics software market is highly concentrated and rapidly growing. Alias and Wavefront are two of the three leading developers and sellers of entertainment graphics software. Alias and Wavefront compete principally with SoftImage Inc., a subsidiary of Microsoft Corp. Other developers and producers of entertainment graphics software produce particular software tools that are used largely as complements rather than substitutes for the product suites offered by Alias, Wavefront and SoftImage, or produce software suites that have found limited customer acceptance relative to the entertainment graphics software offered by Alias, Wavefront and SoftImage.

11. Alias, Wavefront, and SoftImage compete for sales to sophisticated 3D graphics and animation professionals. Although other software developers make entertainment graphics software, Alias, Wavefront and SoftImage are the industry standards, and the ability to run Alias, Wavefront, or SoftImage entertainment graphics software is considered critical for any computer workstation manufacturer to compete successfully in the entertainment graphics workstation market.

12. Prior to the agreements described in paragraph five, Alias negotiated with manufacturers of workstations other than SGI to port its entertainment graphics software products to those manufacturers' workstation platforms. The effect of such agreements, if consummated, would be to enable such workstation manufacturers to compete in the entertainment graphics workstation market.

13. Prior to the acquisitions described in paragraph five, SGI maintained an open software interface for its entertainment graphics workstations, sponsored independent software developer programs, and shared with developers of entertainment graphics software advance information concerning new SGI products to facilitate and promote competitive development of entertainment graphics software.

VII. ENTRY CONDITIONS

14. Entry into the entertainment graphics workstation market would not be timely, likely, or sufficient in its magnitude, character, and scope to deter or counteract anticompetitive effects of the acquisitions in the entertainment graphics workstation market. Other manufacturers of computer workstations have graphic engines for their computers that are technically capable of running entertainment graphics software provided a version of the software is written for use with the workstation and its graphic engine. However, without the possibility of having Alias or Wavefront entertainment graphics software developed for those workstations, entry would be unlikely. Marketing a technically comparable or even an improved combination of non-SGI workstations with entertainment graphics software other than that of Alias or Wavefront would be difficult, time consuming and not likely to occur because of the extensive installed user base of SGI workstations with Alias, Wavefront and SoftImage entertainment graphics software.

15. Entry into the market for the development and sale of entertainment graphics software would not be timely, likely, or sufficient in its magnitude, character, and scope to deter or counteract anticompetitive effects of the acquisitions in the entertainment graphics software market. Developing an entertainment graphics software suite similar to those of Alias and Wavefront is time consuming and unlikely to occur because of extensive installed user bases trained on and using the Alias and Wavefront software programs on SGI entertainment graphics workstations. Combining smaller software developers' niche programs or making smaller producers of entertainment graphics software significant competitors to Alias and Wavefront would be difficult, time consuming and not likely to occur because of the extensive installed user base of SGI workstations with Alias, Wavefront and SoftImage entertainment graphics software.

VIII. COMPETITIVE EFFECTS OF THE PROPOSED ACQUISITIONS

16. The acquisitions described in paragraph five, if consummated, may, individually or in combination, substantially lessen competition and tend to create a monopoly in the relevant markets in violation of Section 7 of the Clayton Act, 15 U.S.C. 18, and Section 5 of the FTC Act, 15 U.S.C. 45, in the following ways, among others:

a. They may foreclose workstation producers other than SGI from significant, independent sources of entertainment graphics software, reducing competition in the manufacture and sale of entertainment graphics workstations;

b. They may increase costs to workstation producers other than SGI for obtaining entertainment graphics software for their workstation platforms, reducing competition in the manufacture and sale of entertainment graphics workstations;

c. They will facilitate SGI's unilateral exercise of market power in entertainment graphics workstations through price discrimination;

d. They may enable SGI to gain proprietary, competitively sensitive information pertaining to other workstation producers if such workstation producers are able to get Alias or Wavefront entertainment graphics software ported to their workstations, reducing competition in the manufacture and sale of entertainment graphics workstations;

e. They will eliminate Alias and Wavefront as substantial independent competitors, eliminate actual, direct and substantial competition between Alias and Wavefront, and increase the level of concentration in the entertainment graphics software market;

f. They will increase barriers to entry into the relevant markets and make two-level entry necessary;

g. They may foreclose, or increase costs to, competitors to Alias and Wavefront in the entertainment graphics software market in developing software for use in connection with future entertainment graphics workstation products developed by SGI, reducing competition in the development, manufacture and sale of entertainment graphics software.

h. They may cause consumers to pay higher prices for entertainment graphics software and for entertainment graphics workstations;

i. They may reduce innovation competition among producers of entertainment graphics software and among producers of entertainment graphics workstations.

IX. VIOLATIONS CHARGED

17. The acquisition agreements described in paragraph five, individually or in combination, constitute a violation of Section 5 of the FTC Act, 15 U.S.C. 45.

18. The acquisitions described in paragraph five, if consummated, would, individually or in combination, constitute a violation of Section 7 of the Clayton Act, 15 U.S.C. 45, and Section 5 of the FTC Act, 15 U.S.C. 45.

Commissioners Azcuenaga and Starek dissenting.

DECISION AND ORDER

The Federal Trade Commission having initiated an investigation of certain acquisitions of the respondent named in the caption hereof, and the respondent having been furnished thereafter with a copy of a draft of complaint which the Bureau of Competition proposed to present to the Commission for its consideration and which, if issued by the Commission, would charge respondent with violation of 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; and

The respondent, Silicon Graphics, Inc., its attorneys, and counsel for the Commission having thereafter executed an agreement containing a consent order, an admission by the 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, or that the facts as alleged in such complaint, other than jurisdictional facts, are true 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, having duly considered the comments received, and having modified paragraph II of the order and paragraph six of the complaint in certain respects, now in further conformity with the procedure prescribed in Section 2.34 of its Rules, the Commission hereby makes the following jurisdictional findings and enters the following order:

1. Respondent Silicon Graphics, Inc. ("SGI") is a corporation organized, existing and doing business under and by virtue of the laws of the State of Delaware with its headquarters and principal place of business located at 2011 North Shoreline Boulevard, Mountain View, California.

2. The Federal Trade Commission has jurisdiction of the subject matter of this proceeding and of the respondents, 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. "*SGI*" means Silicon Graphics, Inc., its directors, officers, employees, agents and representatives, predecessors, successors and assigns; its subsidiaries, divisions, groups and affiliates controlled by SGI; and the respective directors, officers, employees, agents, representatives, successors and assigns of each.

B. "*Alias*" means Alias Research Inc.

C. "*Wavefront*" means Wavefront Technologies, Inc.

D. "*Respondent*" means SGI.

E. "*Entertainment products*" means the computer software ALIAS Animator™ and ALIAS PowerAnimator™ products sold as of May 1, 1995, including Additional Fonts and the Advanced Options for ALIAS PowerAnimator™, and any successor products or future versions or general releases of such products, including any additions, modifications, updates, and enhancements thereto released during such period as specified in the Porting Agreement.

F. "*Entertainment software*" means modelling, animation, rendering, compositing and painting software, as individual software programs or in combination, used in the production of two-dimensional or three-dimensional images for film, video, electronic games, interactive programming, or other entertainment or educational uses, that compete with entertainment products or with any component thereof.

G. "*Porting Agreement*" means an agreement between respondent and a Platform Partner, entered in good faith, to work together to port the entertainment products to be compatible with the Platform

Partner's computer systems in their supported configurations and with associated peripherals, which agreement shall provide, among other things, that respondent shall use reasonable best efforts to optimize the operation of the entertainment products in the context of the Platform Partner's computer systems; and which agreement shall provide that the porting shall occur as soon as reasonably practicable after the Porting Agreement is entered and receives the approval of the Commission; and which agreement shall state the method in which the ported entertainment products shall be sold and marketed on terms competitive with those applicable to entertainment products compatible with respondent's computers; and which agreement shall provide for protection from disclosure or improper use of non-public information.

H. "*ISV Programs*" means programs and other arrangements that respondent makes available generally to independent software developers that facilitate the development of software compatible with respondent's computers and operating systems.

I. "*Platform Partner*" means a company with which respondent has entered into a Porting Agreement pursuant to this order.

J. "*Non-public information*" means any information not in the public domain furnished by the Platform Partner to respondent in its capacity as porter of the entertainment products, and (1) if written information, designated in writing by the Platform Partner as proprietary information by an appropriate legend, marking, stamp, or positive written identification on the face thereof, or (2) if oral, visual or other information, identified as proprietary information in writing by the Platform Partner prior to the disclosure or within thirty (30) days after such disclosure. Non-public information shall not include: (1) information already known to respondent, (2) information which is within the public domain through no violation of this order by respondent, or (3) information which is known to respondent from a person other than the Platform Partner not in breach of a confidential disclosure agreement.

K. "*Acquisitions*" means the acquisitions of Alias and Wavefront by SGI.

L. "*Commission*" means the Federal Trade Commission.

II.

It is further ordered, That,

A. Not later than March 31, 1996, respondent shall enter into a Porting Agreement that receives the prior approval of the Commission with a company that receives the prior approval of the Commission. After such Commission approval, respondent shall port the entertainment products to the Platform Partner's computer systems as provided in the Porting Agreement.

Provided however, nothing in this order shall prohibit respondent from entering into additional porting agreements with one or more platform partners without the prior approval of the Commission.

B. The purpose of the Porting Agreement and the porting of the entertainment products, pursuant to the Porting Agreement, is to ensure that ported entertainment products compatible with the Platform Partner's computer system will be marketed and sold in competition with the entertainment products operating on respondent's computer systems, and to remedy the lessening of competition resulting from the proposed Acquisitions as alleged in the Commission's complaint.

III.

It is further ordered, That, absent the prior written consent of the proprietor of non-public information or unless expressly permitted by any Porting Agreement, (1) respondent shall use any non-public information only in porting the entertainment products pursuant to such porting agreement, and (2) any persons involved in porting the entertainment products shall not provide, disclose, or otherwise make available any non-public information to other employees of respondent.

IV.

It is further ordered, That respondent shall:

A. Establish and maintain an open architecture, and publish the Application Program Interfaces ("APIs"), for respondent's computers and operating systems in such manner that software developers and producers may develop and sell entertainment software, for use on respondent's computers, in competition with entertainment software offered by respondent; and

B. Respondent shall extend to developers of entertainment software the right to participate in ISV Programs on terms no less favorable to such developers than those terms applicable to developers of other software for use on respondent's computers and operating systems.

C. The purpose of this paragraph IV is to allow entertainment software developers and producers to develop and sell entertainment software for use on respondent's computers and operating systems in competition with respondent, and to remedy the lessening of competition resulting from the proposed Acquisitions as alleged in the Commission's complaint.

V.

It is further ordered, That, within sixty (60) days after the date this order becomes final and every sixty (60) days thereafter until respondent has fully complied with the provisions of paragraph II of this order, respondent shall submit to the Commission a verified written report setting forth in detail the manner and form in which it intends to comply, is complying, or has complied with those provisions. Respondent shall include in its compliance reports, among other things that are required from time to time, a full description of the efforts being made to comply with paragraph II of this order.

VI.

It is further ordered, That, one year from the date this order becomes final, annually thereafter for the next four (4) years, and at other times as the Commission may require, respondent shall file with the Commission verified written reports setting forth in detail the manner and form in which it has complied and is complying with paragraphs II, III and IV of this order.

VII.

It is further ordered, That, for the purposes of determining or securing compliance with this order, and subject to any legally recognized privilege, upon written request and on reasonable notice

to respondent, respondent shall permit any duly authorized representatives of the Commission:

A. Access, during office hours and in the presence of counsel, to inspect and copy all books, ledgers, accounts, correspondence, memoranda and other records and documents in the possession or under the control of respondent relating to any matters contained in this order; and

B. Upon five (5) days notice to respondent, and without restraint or interference from respondent, to interview officers or employees of respondent, who may have counsel present, regarding such matters.

VIII.

It is further ordered, That respondent shall notify the Commission at least thirty (30) days prior to any proposed change in respondent, such as dissolution, assignment, sale resulting in the emergence of a successor, or the creation or dissolution of subsidiaries or any other change that may affect compliance obligations arising out of this order.

IX.

It is further ordered, That this order shall expire five (5) years from the date it becomes final.

Commissioners Azcuenaga and Starek dissenting.

DISSENTING STATEMENT OF COMMISSIONER MARY L. AZCUENAGA

The complaint in this matter alleges that the two companies that Silicon Graphics proposes to acquire, Alias and Wavefront, are two of the three leading developers and sellers of entertainment graphics software in a highly concentrated market in which entry is difficult and time consuming.¹ The Commission alleges, and I agree, that the elimination of competition between Alias and Wavefront will substantially lessen competition in violation of Section 7 of the Clayton Act.² The evidence persuades me that the Commission has

¹ Complaint paragraphs ten, eleven and fifteen.

² Complaint paragraph 16c.

a strong case under Section 7 based on this horizontal combination, and the obvious course of action would be to challenge the acquisitions on this basis. Such a challenge, if successful, would leave either Alias or Wavefront free to contract to produce entertainment graphics software for other hardware manufacturers.

Instead, the Commission chooses to rely on vertical foreclosure theory to impose requirements that fail to preserve existing competition and that ultimately may create inefficiency and reduce competition. A number of legitimate concerns were raised during the public comment period that identified some but not all of the problems in the order. To the extent that any vertical problems should concern us, they would be resolved by stopping the horizontal transaction. The decision and order having failed to achieve straightforward relief for the real competitive problem, the combination of Alias and Wavefront, I dissent.

DISSENTING STATEMENT OF COMMISSIONER ROSCOE B. STAREK, III

I do not agree with the Commission's decision to issue its Final order in this matter. The complaint alleges anticompetitive effects arising from the vertical integration of the leading manufacturer of entertainment graphics workstation, Silicon Graphics, Inc. ("SGI"), with two leading suppliers of entertainment graphics software, Alias Research, Inc., and Wavefront Technologies, Inc.¹ I have not been persuaded that these vertical acquisitions are likely "substantially to lessen competition" in violation of Section 7 of the Clayton Act, 15 U.S.C. 18. Moreover, even if one assumes the validity of the theories of anticompetitive effects, the Commission's order does not appear to prevent the alleged effects and may create inefficiency.

The Commission alleges, *inter alia*, that the acquisitions will reduce competition through two types of foreclosure: (i) nonintegrated software vendors will be excluded from the SGI platform; and (ii) rival hardware manufacturers will be denied access to Alias and Wavefront software, without which they cannot effectively compete against SGI.² Vertical foreclosure theories

¹ The Commission apparently finds that the horizontal combination of Alias and Wavefront is not anticompetitive on net: the order addresses alleged vertical problems only.

² Precedent for this "reciprocal foreclosure" analysis lies uncomfortably in *A.G. Spalding & Bros.*, 56 FTC 1125 (1960), in which the Commission rejected Spalding's acquisition of Rawlings Manufacturing Company. Before the acquisition, Spalding did not manufacture baseball gloves, but instead purchased them for resale; Rawlings manufactured baseball gloves and sold them to other resellers. The Commission found that, "by acquiring Rawlings, Spalding can not only prevent competitors from purchasing [gloves] from Rawlings but can also foreclose manufacturers of [gloves] from access to Spalding as a purchaser thereof." 56 FTC at 1169.

generally provide a weak basis for Section 7 enforcement,³ and this foreclosure scenario has particular problems, both logical and factual.

In general, the two types of foreclosure tend toward mutual exclusion. The very possibility of excluding independent software producers from the SGI platform suggests the means by which competing workstation producers will avoid foreclosure. The nonintegrated software producers surely have incentives to supply the "foreclosed" workstation producers, and each workstation producer has incentives to induce nonintegrated software suppliers to write for its platform. Otherwise, "we are left to imagine eager suppliers and hungry customers, unable to find each other, forever foreclosed and left to languish."⁴ This predicament is improbable in the dynamic markets at issue.

The acquisition does not appear likely to give rise to significant, anticompetitive foreclosure of nonintegrated software producers. Indeed, the description of the pre-merger state of competition in the Commission's complaint tends to exclude this possibility. The complaint alleges that software producers other than Alias, Wavefront, and Microsoft's SoftImage are either competitively insignificant or complementary, and that there is virtually no likelihood of entry by producers of substitutable SGI-compatible software owing to the entrenched positions of Alias and Wavefront. If both propositions are true, then the merger cannot appreciably foreclose software entry or expansion. Silicon Graphics' acquisition of Wavefront and Alias cannot be the cause of substantial post-merger foreclosure of competitively significant alternatives to the software of the two acquired firms if the posited software market was effectively foreclosed before the merger with SGI. In addition, SGI has strong incentives to induce expanded supply of SGI-compatible software: increasing the supply of compatible software (or of any complementary product) increases the demand for SGI's workstations.

It is perhaps more plausible that the transaction could result in reduced supplies of software, or higher costs of obtaining software,

³ For a critical discussion of pre- and post-Chicago theories of foreclosure, see David Reiffen & Michael Vita, "Is There New Thinking on Vertical Mergers? A Comment," 63 Antitrust L.J. 917 (1995). See also Roscoe B. Starek, III, "Reinventing Antitrust Enforcement? Antitrust at the FTC in 1995 and Beyond," Remarks at "A New Age of Antitrust Enforcement: Antitrust in 1995" Conference, Marina Del Rey, California (Feb. 24, 1995).

⁴ See Robert H. Bork, "The Antitrust Paradox" 232 (1978) (referring to similar foreclosure reasoning in A.G. Spalding, Bork observed that "the Commission could have cured this aspect of the situation by throwing an industry social mixer").

for SGI's workstation rivals. Even so, this would primarily be a consequence of the horizontal aspects of the transaction -- *i.e.*, the combination of two of the three principal vendors of the relevant software -- rather than its vertical aspects. The Commission eschews an enforcement action based on a horizontal theory, however, because of its cost in forgone efficiencies. If the horizontal software combination of Alias and Wavefront is efficiency-enhancing, the net anticompetitive impact of these transactions comes from SGI's vertical integration with Alias and Wavefront. If this is so, why not seek injunctive relief against the vertical integration, and avoid the costs of the ineffective regulatory remedy presented in the order?

There are at least two reasons for rejecting the alternative of seeking injunctive relief. The first is that there are demonstrable efficiencies associated with exclusive arrangements between hardware and software vendors.⁵ Second, The merger's anticompetitive effects are difficult to establish. More generally, in order to establish SGI's preeminence among producers of entertainment graphics workstations, the complaint alleges that entry into the manufacture of such hardware is extremely unlikely because of the substantial costs of porting SGI-specific software (especially the "high end" variants) to non-SGI platforms. This undermines the contention that the merger would induce a substantial lessening of competition in the entertainment graphics workstation market.⁶

⁵ A software producer's decision to write software exclusively for a specific hardware producer suggests an efficiency rationale for the software producer's subsequent integration with that hardware manufacturer by means of a vertical merger -- namely, to avoid the expropriation by the hardware producer of any software assets that are specialized to that hardware firm. An input supplier's specialized software may become so specialized to a hardware firm. An input supplier's specialized software may become so specialized to a specific hardware producer that the software has no value to other potential customers. This exposes the software supplier to the risk that the hardware manufacturer might behave opportunistically, to the detriment of the "committed" supplier, once the specialized software assets are created. Vertical integration of the buyer and the "committed" supplier eliminated the possibility of such opportunism. This is a well-established procompetitive rationale for vertical mergers. See, e.g., Benjamin Klein, "Vertical Integration as Organizational Ownership: The Fisher Body-General Motors Relationship Revisited," 4 J.L. Econ. & Org. 199 (1988); Kirk Monteverde & David J. Teece, "Supplier Switching Costs and Vertical Integration in the Automobile Industry," 13 Bell J. Econ. 206 (1982); Kirk Monteverde & David J. Teece, "Appropriable Rents and Quasi-Vertical Integration," 25 J.L. & Econ. 321 (1982); Benjamin Klein, Robert G. Crawford & Armen A. Alchian, "Vertical Integration, Appropriable Rents, and the Competitive Contracting Process," 21 J.L. & Econ. 297 (1978).

⁶ The preceding discussion assumes, *arguendo*, the existence of relevant markets that are most favorable to the Commission's theory of competitive harm from vertical integration. Whether these narrowly defined markets are appropriate is questionable, however. To the extent that PCs are becoming closer substitutes for entertainment graphics workstations, for example, it is increasingly unlikely that a prerequisite for anticompetitive effects from a vertical merger -- pre-merger market power in a relevant market -- is satisfied.

Overall, I am unpersuaded that this transaction diminishes competition in any relevant market.⁷ Even had I concluded otherwise, however, I would not endorse the consent order, the terms of which would require SGI to: (1) port its software to a workstation competitor⁸ and (2) maintain an open architecture providing access to software developers on nondiscriminatory terms. The problems with remedies of this sort are substantial.⁹ For example, requiring a firm to sell an input to a rival is an ineffective remedy unless the Commission also regulates the terms of the sale. Absent such regulation (which the Commission does not undertake in the Final Order it has approved), the seller simply raises price and/or diminishes quality to the point where profitable entry is precluded. The burden associated with enforcing an order that regulates the terms of sale -- the Commission would be required to determine the "competitive price" and "competitive quality" for such porting rights -- cannot be overestimated. For this reason, the Commission has prudently shied away from such remedies in the past.

Second, requiring SGI to port entertainment graphics software to a third party will likely create substantial inefficiencies. The evidence suggests that there are one or more efficiencies associated with exclusive arrangements between software and hardware vendors; such arrangements existed well before the current transaction was proposed. Preventing SGI from availing itself of those efficiencies is not likely to benefit consumers.

For the foregoing reasons, I respectfully dissent from the Commission's decision to issue its Final Order in this matter.

⁷ The complaint also alleges that vertical integration of SGI with Alias and Wavefront will foster anticompetitive price discrimination against certain entertainment graphics customers. If the customers are already differentiable according to their demand elasticities for SGI workstations (or for the acquired software products), it is not clear how vertical integration enhances the probability of price discrimination. To the extent that price discrimination possibilities are enhanced, it would appear to be as a result of the horizontal combination of Alias and Wavefront. And if SGI and the combined Alias/Wavefront would have market power in their respective complementary markets, the most likely effect of vertical integration may be lower prices (due to elimination of the "double mark-up" problem). See, e.g., Jean Tirole, "The Theory of Industrial Organization" 174-75 (1988).

⁸ Shortly after the conclusion of the public comment period in this matter, the Commission deleted from the proposed order the mention of four companies in paragraph II.B as possible "platform partners." Although I applaud this modest change for removing the implication that those four firms were somehow "favored" candidates to serve as platform partners, the deletion of the four names does not affect my substantive competition analysis of the Commission's Final Order.

⁹ For a discussion of why nondiscrimination remedies are problematic, see, for example, Timothy Brennan, "Why Regulated Firms Should Be Kept Out of Unregulated Markets: Understanding the Divestiture in *U.S. v. AT&T*," 32 Antitrust Bull. 741 (1987).

Modifying Order

120 F.T.C.

IN THE MATTER OF

OCCIDENTAL PETROLEUM CORPORATION, ET AL.

MODIFYING ORDER IN REGARD TO ALLEGED VIOLATION OF
SEC. 7 OF THE CLAYTON ACT AND SEC. 5 OF THE
FEDERAL TRADE COMMISSION ACT*Docket 9205. Modified Final Order, Feb. 3, 1994--Modifying Order, Nov. 16, 1995*

This order reopens a 1994 modified final order that settled allegations that Occidental's acquisition of Tenneco would substantially reduce competition in the U.S. market for mass and suspension PVC and required the Commission's prior approval before acquiring the stock or PVC assets of any PVC producer in the United States. This order modifies the consent order by deleting the prior approval requirements in paragraph VI of the consent order pursuant to the Commission's Prior Approval Policy, under which the Commission presumes that the public interest requires reopening cases and setting aside the prior approval provisions in outstanding merger orders, making them consistent with the policy.

ORDER REOPENING AND MODIFYING ORDER

On August 7, 1995, Occidental Petroleum Corp. and Occidental Chemical Corp (collectively "Occidental"), filed a Petition To Reopen and Modify Order ("Petition") in this matter. Occidental asks that the Commission reopen and modify the 1994 order in this matter pursuant to Section 5(b) of the Federal Trade Commission Act, 15 U.S.C. 45(b), and Section 2.51 of the Commission's Rules of Practice and Procedure, 16 CFR 2.51, and consistent with the Statement of Federal Trade Commission Policy Concerning Prior Approval and Prior Notice Provisions, issued June 21, 1995 ("Prior Approval Policy Statement").¹ Occidental in the Petition requests that the Commission reopen and modify the order in Docket No. 9205 by deleting the requirement in paragraph VI that Occidental seek prior Commission approval for certain acquisitions. The Petition was on the public record for thirty days; no comments were received.

The Commission in its Prior Approval Policy Statement "concluded that a general policy of requiring prior approval is no longer needed," citing the availability of the premerger notification and waiting period requirements of Section 7A of the Clayton Act, 15

¹ 60 Fed. Reg. 39,745 (Aug. 3, 1995); 4 Trade Reg. Rep. (CCH) ¶ 13,241, at 20,991 (June 22, 1995).