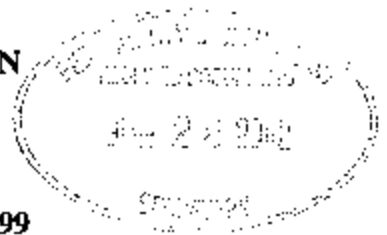


UNITED STATES OF AMERICA
BEFORE THE FEDERAL TRADE COMMISSION



_____)
In the Matter of _____)
MSC.SOFTWARE CORPORATION, _____)
a corporation. _____)
_____)

Docket No. 9299

Public Version

COMPLAINT COUNSEL'S PRETRIAL BRIEF

In compliance with the Court's Second Revised Scheduling Order, as amended on June 11, 2002, Complaint Counsel submit this Pretrial Brief together with Pretrial Proposed Findings of Fact and Pretrial Proposed Conclusions of Law.

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INTRODUCTION

On October 9, 2001, the Commission issued its complaint in this matter. The complaint alleges that Respondent MSC Software Corporation ("MSC") unlawfully acquired Universal Analytics, Inc. ("UAI") and Computerized Structural Analysis and Research Corporation ("CSAR") in 1999 in violation of Section 7 of the Clayton Act and Section 5 of the FTC Act. The complaint alleges that the acquisitions may substantially lessen competition or lead to a monopoly in violation of Section 7 of the Clayton Act and Section 5 of the FTC Act in the market for advanced versions of a specialized engineering structural analysis software program known as "Nastran." The Commission's Notice of Contemplated Relief identified several steps necessary to restore competition, the core of which is the creation of up to two competitors offering advanced versions of Nastran.

MSC, UAI, and CSAR had long been vigorous competitors, each offering an advanced version of Nastran to customers in the aerospace, automotive and other industries.. These competing versions of the software evolved from a program originally developed by NASA in the 1960's. The common origin of these three Nastran versions made switching between them relatively easy. UAI and CSAR also took steps to facilitate switching by maintaining data compatibility with MSC Nastran. Little additional training was required when switching from one Nastran to another. Legacy data created in one Nastran generally had been transferrable to another Nastran without the need for substantial rewriting and clean up. The similarity of the software architecture of the Nastran versions also facilitated the use of the same complementary software products. For these reasons, structural analysis software that does not share the Nastran origin is a less-effective competitive constraint on MSC Nastran than the competing versions from UAI and CSAR.

MSC had long been the dominant supplier of advanced Nastran, with an estimated 90 percent of worldwide advanced Nastran revenue. UAI and CSAR were substantially smaller firms each with about a five percent share. However, the smaller firms exercised greater competitive influence than their respective market shares might indicate.

UAI's and CSAR's strategy was to target MSC's largest and key Nastran accounts. Both enjoyed considerable success by the late 1990s. Nearly all of MSC's largest accounts either licensed, or were evaluating or had evaluated, UAI's or CSAR's Nastrans. Even customers that chose MSC Nastran often used UAI and CSAR as leverage to obtain better prices from MSC or to induce MSC to provide needed enhancements. Customers who licensed UAI or CSAR or used them as negotiating leverage included

Competition among the three Nastran suppliers led to discounting, falling prices, and increased development of Nastran as each firm vied to retain and increase its customer base. Consumers, of course, benefitted from this competition, especially aerospace and automotive users, including the U.S. government defense and space agencies. MSC, of course, disliked the competition. Not only did MSC suffer price erosion and flat revenue, but the competition undermined MSC's reputation as the premier Nastran supplier. MSC also feared an even more competitive market if UAI and CSAR were acquired by other engineering software suppliers. See CX-3 at MS-0008634.

MSC decided to eliminate this competitive pressure by acquiring UAI and CSAR.

. CX-

2365.

CX-1. Similarly,

CX-2. On both occasions,

CX-2632.

CX-446 at

No elaborate market analysis is needed to show that these acquisitions were anticompetitive. The acquisitions wiped out the competitive forces that had driven MSC to lower its prices and to respond more quickly to users' needs for Nastran enhancements. Additionally, the acquisitions removed UAI and CSAR as acquisition candidates for other software engineering firms. Without competition from UAI and CSAR, consumers are harmed.

In order to restore competition, MSC must be ordered to license, royalty-free, its advanced Nastran software to up to two acquirers capable of replacing immediately the lost competition. The newcomers or licensees would pay an up-front lump sum, the amount of which would be negotiated by MSC and the licensee. Requiring divestiture of only the UAI and CSAR software acquired is insufficient because MSC has failed to invest in the UAI Nastran and CSA Nastran codes and has chosen to let them become stale or outdated. While both these codes have sat on the shelf, MSC has continued to update and enhance MSC Nastran, including integrating some UAI Nastran and CSA Nastran features. Thus, MSC Nastran today differs substantially from the three rival Nastran versions competing in 1999. MSC must rescind all paid-up licenses entered into since the acquisitions where

customers wish to switch to the new Nastran supplier or suppliers. MSC also must afford customers the ability to “carry” part of their paid-up fees to the new supplier so that the customer does not face any financial penalty for switching.

In summary, there is overwhelming evidence that MSC's acquisitions unlawfully eliminated competition and tended to create a monopoly. MSC must now be required to enter into a perpetual, royalty-free license for the current versions of MSC Nastran to restore the competition that would have occurred but for the acquisitions and to eliminate any disincentives for customers to switch to the new entrants. Additional relief provisions are discussed below. Complaint Counsel will provide expert testimony at trial to confirm the appropriate product market, the basis for finding anticompetitive effects, and the need for the requested relief.

STATEMENT OF FACTS

MSC is the largest supplier of computer-aided engineering simulation software in the world. In 2001, its annual worldwide revenue was \$236 million. MSC has an estimated 1350 employees located around the world. MSC has grown substantially through acquisition, having acquired six other engineering software vendors or resellers since 1998. MSC is a publicly traded company.

In the late 1960s, MSC became a contractor to the National Aeronautics and Space Administration (“NASA”), for purposes of developing a linear structural analysis software product called Nastran, which is an acronym for “NASA Structural Analysis System.” UAI followed MSC in the early 1970s as the NASA contractor responsible for further development of Nastran. NASA released Nastran into the public domain, after which MSC and then UAI began offering enhanced

versions for commercial use. CSAR, formerly a contract software developer for MSC, also began offering its own enhanced version of Nastran for commercial licensing in the 1980s. Both UAI and CSAR continued to enhance their versions of Nastran until acquired by MSC.

Nastran was one of the first computer-aided engineering simulation tools developed using the method of structural analysis known as finite element analysis or "FEA." Software that performs such analysis, solving mathematical algorithms embodied in the software, is often referred to as an "FEA solver." Finite element analysis can be used to analyze a wide variety of the physical properties of a given mechanical design, such as for a launch vehicle, an aircraft or an automobile. These physical properties include strength, stiffness, vibration, bending, heat transfer and many other characteristics. Solver software utilizes "linear" or "nonlinear" mathematical algorithms to perform the analysis, depending on the inherent physical characteristics of the property being analyzed.

NASA developed Nastran to consolidate a series of different structural mechanical analysis tools into a single, flexible general-purpose computer program. NASA believed that adoption of a common solver for use throughout NASA would facilitate NASA projects, save time and money, minimize switching costs, avoid the need for training in multiple solvers, and reduce errors in exchanging data among NASA centers and contractors. NASA also believed that putting Nastran into the public domain would increase its usage, promote development, and control costs.

Having been developed for large-scale structures common in NASA projects, Nastran became the standard large-scale linear structural analysis solver for the aerospace industry. The auto industry eventually found Nastran well suited for its needs as well. Automobiles, like aerospace structures, are large-scale structures. Nastran enabled the auto makers to design lighter, quicker, and longer-lasting

automobiles. Today, Nastran is widely-used for advanced linear structural analyses throughout the aerospace and automotive industries. MSC Nastran, as well as UAI Nastran and CSA Nastran during the period when those programs were being maintained and updated, were "advanced" versions of Nastran because they were continually enhanced to meet the current needs for sophisticated tools for professional analysts in the aeronautical and automotive industries. Other limited versions of Nastran software, tailored for less sophisticated needs of mechanical designers, were also sold by all three firms.

LEGAL ARGUMENT

A. **MSC's Acquisitions of UAI Nastran and CSA Nastran Violate Section 7 Of The Clayton Act and Section 5 of the FTC Act**

Section 7 of the Clayton Act prohibits acquisitions "in any line of commerce or in any activity affecting commerce . . . [if] the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." 15 U.S.C. § 18. To establish a § 7 violation, Complaint Counsel must only show that it is reasonably likely that the acquisition will cause anticompetitive effects. See *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 713 (D.C. Cir. 2001) ("Congress used the words 'may be substantially to lessen competition' . . . , to indicate that its concern was with probabilities, not certainties.").

"Section 7 does not require proof that a merger or other acquisition [will] cause higher prices in the affected market. All that is necessary is that the merger create an appreciable danger of such consequences in the future." *Hospital Corp. of Am. v. FTC*, 807 F.2d 1381, 1389 (7th Cir. 1986).

Section 5 of the FTC Act also prohibits acquisitions by firms to monopolize or to attempt to monopolize the market.

To predict whether an acquisition may substantially lessen competition or tend to create a monopoly under Section 7 of the Clayton Act, courts consider (1) the product market in which to assess the transaction; (2) the geographic market in which to assess the transaction, and (3) the transaction's probable effect on competition in the product and geographic markets. *See FTC v. Swedish Match*, 131 F. Supp.2d 151, 156 (D.D.C. 2000); *FTC v. Staples, Inc.*, 970 F. Supp. 1066, 1072-73 (D.D.C 1997). Under the FTC Act Section 5 allegation, the Court must additionally determine whether MSC monopolized or attempted to monopolize the market through its acquisitions of UAI and CSAR.¹

I. The Relevant Product Market Is Comprised of MSC Nastran, UAI Nastran, and CSA Nastran

Merger analysis begins by determining the relevant product market. *FTC v. Cardinal Health*,

¹ The Sherman Act provides that it is unlawful to "monopolize, or attempt to monopolize . . . any part of the trade or commerce among the several States." 15 U.S.C. § 2. The Commission can prosecute violations of the Sherman Act as "unfair methods of competition" that are proscribed by Section 5 of the Federal Trade Commission Act. *See, e.g., FTC v. Motion Picture Advertising Serv. Co.*, 344 U.S. 392, 394 (1953). The offense of monopolization consists of "(1) the possession of monopoly power in a relevant market, and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident." *United States v. Grinnell Corp.*, 384 U.S. 563, 570-71 (1966). The offense of monopolization is complete with the acquisition or maintenance of monopoly power; that power does not have to be exercised. *See Berkey Photo v. Eastman Kodak Co.*, 603 F.2d 263, 275 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093, 100 S.Ct. 1061 (1980) ("Unlawfully acquired power remains anathema even when kept dormant"). Proof of a change in price or output in the marketplace is not required so long as the conduct in question has resulted in the power to effect the market. *See Eastman Kodak Co. v. Image Technical Services, Inc.*, 112 S.Ct. 2072, 2080-81 (1992). The essential elements of an attempt to monopolize are: (1) specific intent to control prices or destroy competition in some part of commerce; (2) predatory or anticompetitive conduct directed to accomplishing the unlawful purpose; and (3) a dangerous probability of success. *See Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 113 S. Ct. 884, 890-91 (1993).

Inc., 12 F. Supp. 2d 34, 46 (D.D.C. 1998). "The outer boundaries of a product market are determined by the reasonable interchangeability of use [by consumers] or the cross-elasticity of demand between the product itself and substitutes for it." *Swedish Match*, 131 F. Supp.2d at 157, quoting *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962); see *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 395 (1956). Interchangeability of use and cross-elasticity of demand concern (1) the availability of products that are similar in character or use to the product in question and (2) the degree to which buyers are willing to substitute those similar products for the product. *Swedish Match*, 131 F. Supp.2d at 157, citing *E.I. du Pont de Nemours*, 351 U.S. at 393. The market "must be drawn narrowly to exclude any other product to which, within reasonable variations in price, only a limited number of buyers will turn." *Times-Picayune Publishing Co. v. United States*, 345 U.S. 594, 612 n.31 (1953).

Thus, the pivotal question in product market definition is whether an increase in price for one product would cause enough buyers to turn to other products so as to make the price increase unprofitable. See *Staples*, 970 F. Supp. at 1074. This analytical approach is incorporated in the U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines ¶ 1.11 (hereinafter "Merger Guidelines"). The Merger Guidelines take the smallest possible group of competing products and ask whether a "hypothetical monopolist over that group of products would profitably impose at least a 'small but significant and nontransitory' [price] increase." Merger Guidelines § 1.11.

Advanced Nastran is the relevant product market. MSC in contracts with customers describes its MSC Nastran solver as "an advanced version of the United States government sponsored structural

analysis program known as Nastran.” *See, e.g.,* CX-2390 at MSC-38 000183 (MSC Corporate Agreement with). The relevant product market in this matter is comprised of MSC Nastran, UAI Nastran, and CSA Nastran. Customers using an advanced Nastran would turn first to another advanced Nastran in response to a small but significant nontransitory price increase. While customers would eventually turn to other solvers at even higher price increases, the other solvers would not prevent a small but significant price increase, and therefore are not part of the relevant product market. At trial, Complaint Counsel will present expert economic testimony explaining the basis for finding advanced Nastran as the appropriate product market.

Evidence of actual anticompetitive effects—such as price increases or output reductions—can obviate extensive inquiry into market definition. *See Federal Trade Comm’n v. Indiana Federation of Dentists*, 476 U.S. 447, 460-61 (1986); *accord Toys ‘R’ Us, Inc. v. Federal Trade Comm’n*, 221 F.3d 924, 937 (market power may be proven through evidence of anticompetitive effects or proof of relevant market and market concentration above the relevant threshold); *Federal Trade Comm’n v. Libbey, Inc.*, No. 02-CV-60, 2002 WL 984208, at *10 (D.D.C., Apr. 22, 2002) (where Commission can show after administrative investigation that there were “actual sustained adverse effects on competition” then it need not engage in elaborate market analysis). On the other hand, post-acquisition evidence can be manipulated by the respondent and, thus, must be viewed with suspicion as discussed below. As we highlight below, there is evidence of post-acquisition evidence of price increases and output restrictions that further supports the finding of an advanced Nastran product market comprised of MSC Nastran, UAI Nastran, and CSA Nastran.

a. MSC, UAI, and CSAR Based Business Decisions on the Prospect that Buyers Would Substitute Among the Advanced Nastran Solvers

In this case, there is abundant evidence supporting this relevant product market. MSC, UAI, and CSAR all made business decisions on the belief that customers would switch between these three Nastran suppliers in response to relatively small changes in prices. Indeed, MSC acquired UAI and CSAR precisely because customers had switched to UAI Nastran and CSA Nastran in response to relative changes in prices. For example,

CX-2365.

CX-15 at MSC-02 002288.

CX-6 at MSC0004061.

CX-8 at MS-0003279.

CX-1179.

When recommending the MSC Board the acquisitions, MSC's management also focused

on

CX-1. Similarly, MSC's management stated

CX-2. Both

CX-10.

The appropriateness of a market comprised of MSC's, UAI's, and CSAR's advanced Nastrans is further established by MSC's pricing behavior and response to competitive Nastran development by UAI and CSAR. MSC had lowered prices and offered more Nastran development in order to stem the loss of further business to UAI Nastran and CSA Nastran. Thus, MSC's pricing was constrained by UAI and CSA Nastran.

CX-18.

CX-4.

CX-14 at MS-0002029.

CX-7; CX-2379. Without this consistent competitive pressure from UAI and CSAR, MSC

will be able to reduce its discounting and raise its prices and will be less inclined to supply Nastran enhancements needed by its customers.

b. Buyers Shifted or Considered Shifting Between the Advanced Nastran Solvers

The appropriateness of the advanced Nastran market is reflected in switching among the advanced Nastrans by users. UAI had been successful in picking up Nastran business from [redacted] by offering lower prices and showing a greater willingness to provide customization and special features for Nastran. CSAR had been successful in securing business at [redacted] with lower prices and offering [redacted] greater performance enhancement as well as at [redacted]. CSAR also became [redacted]'s preferred Nastran supplier during the year prior to the acquisition which offered substantial new Nastran business for CSAR.

The record will show that users turned to UAI Nastran and CSA Nastran as alternatives to MSC Nastran in response to higher Nastran prices or when needing advanced Nastran enhancements not offered by MSC. Following are several examples of the competitive rivalry between the three rivals involving MSC's largest Nastran customers:

- [redacted]: From 1992 through 1999, [redacted] used both MSC Nastran and CSA Nastran. It estimated that competition in the early 1990s between MSC Nastran and CSA Nastran reduced its Nastran acquisitions costs by \$1 million annually and encouraged substantial technical improvements in both advanced Nastrans. See CX-835. When seeking a new multi-year agreement for 1999 and beyond, [redacted] offered all its Nastran business to one supplier. MSC initially lost the account to CSAR but later lowered its price.

After lowering its price, MSC won a new six-year agreement for MSC Nastran beginning in 1999. See Dep. at 130 to 34. [redacted] calculated that its savings under the new contract exceeded \$7 million over six years between MSC's original quote to its final quote. See CX-818 at 0338. Following the CSA acquisition, MSC sought to terminate the existing [redacted] contract and induced [redacted] to agree to an

increased price for Nastran. CX-1960, CX-814, CX-1959, CX-1957. This prompted one official to write to his colleague, "You said that if we dropped CSA, MSC would raise their rates. I said that we had a 6 year contract, and that MSC must certainly have learned from the consequences of the last confrontation we had over rates. You were right. I was wrong." CX-1958.

- _____: In 1996, MSC reported " NASTRAN account is under severe attack on price from CSAR and now UAI." CX-17 However, after the acquisitions concluded that it had little leverage in negotiating a new 2000 Nastran contract with MSC. An internal e-mail projected that MSC would have "[n]o fear that _____ will discontinue use of MSC Nastran in near future. . . . Few viable suppliers in marketplace especially in light of MSC's recent acquisitions." CX-1226.

CX-2237 at MSC-162 000192.

CX-2024.

- _____: MSC provided _____ with an unlimited usage multi-site license that expired at the end of 1999. At around the time of the expiration, the _____ sites were split up with _____ purchasing several units. The remaining unit was eventually acquired by _____.

CX-1300.

CX-2279 at

MSC-38 004399.

- _____: In 1998, _____ designated CSA Nastran over MSC Nastran as _____'s preferred FEA supplier.

CX-434.

See CX-331.

- _____: These two _____ companies were contractors and subcontractors to develop _____. They replaced MSC Nastran with UAI Nastran for work on _____. UAI had agreed to enhance UAI Nastran to meet the needs of the _____ when those enhancements were not available in MSC Nastran. See _____ Dep. at 205-08; _____ Dep. at 106-10.

- _____: In the mid-1990s, _____ selected UAI Nastran over MSC Nastran

and CSA Nastran as its primary solver. Following the acquisitions, however, had to switch back to MSC Nastran, paying substantially more for its Nastran usage. CX-2456

● _____: was in the process of conducting benchmark studies of UAI Nastran and CSA Nastran prior to the acquisitions.

.” CX-2149, CX-2429.

UAI and CSAR were direct threats to take business away from MSC at these accounts because many of the accounts viewed UAI Nastran and CSA Nastran as “clone competitors” with lower prices and a greater willingness to enhance Nastran to meet their needs at competitive prices.

CX-1 at

MS-0000699; CX-2 at MS-0000735. The competitive pressure from UAI Nastran and CSA Nastran was sharpest in MSC’s largest and key accounts. UAI and CSAR were smaller firms and tended to target MSC’s largest or key accounts because those accounts offered the greatest potential for substantial numbers of licenses.

Relatively minimal switching costs among the advanced Nastrans made them readily interchangeable and explains why switching was practical in response to higher prices. The unique origin of the advanced Nastrans helps mark the boundaries of the market. Additionally, the data compatibility and functional interchangeability made switching relatively easy. UAI had informed one prospective distributor for UAI Nastran that it could tell users that they could transition from MSC Nastran to UAI Nastran with a one-day training course. CX-1514. Because of the common software architecture among the advanced Nastrans, users need little time to become proficient in another advanced Nastran.

. CX-15 at MSC-02 002288. Similarly,

See CX-21;

CX-22.

See CX-2629 (document).

In contrast, switching from Nastran to another solver is much more costly when accounting for training, proficiency, complimentary software, and legacy files.

(CX-1527).

CX-446 at 0013.

CX-2581 at .

Additionally, switching away from Nastran to a non-Nastran may not even be possible were the customer's partners or industry practice require or prefer the use of Nastran. These "network" effects are found particularly in multi-party programs such as and the project. *See* CX-2106 at MSC-135 001769. Where there are networks, members are unlikely to switch in response to a small but significant nontransitory price increase.

c. Buyers Did Not View Non-Nastran Solvers As Close Substitutes for Advanced Nastrans

While MSC will point to occasions where it faced competition from other solvers, non-Nastran solvers do not pose a competitive constraint in any way comparable to UAI Nastran and CSA

Nastran. They are less effective competitors because the higher cost of switching from advanced Nastran to non-Nastran solvers insulates the advanced Nastrans from such competition. As the court noted in *Staples*, “the mere fact that a firm may be termed a competitor in the overall market-place does not necessarily require that it be included in the relevant product market for antitrust purposes.” *Staples*, 970 F.Supp. at 1075.

All solvers enjoy some lock-in effects, but prior to the acquisitions advanced Nastran users could switch relatively easily between advanced Nastran versions, compared with switching to a non-Nastran solver. The Nastran solvers’ common origin and architecture, data compatibility, and user interface make the Nastrans highly interchangeable. Switching to a non-Nastran solver involves comparatively greater costs accounting for investments lost in reusable legacy models and data, for the additional training and time needed to become proficient in the new code, and the loss of complementary software and in-house codes written to work with Nastran. Switching is also less likely between advanced Nastrans and non-Nastran solvers because of the greater functional differences between the advanced Nastrans and non-Nastran solvers. The advanced Nastrans developed over long periods to meet the particular needs of the automotive and aerospace industries. Other codes have evolved differently to meet the particular needs of other industries.

The substantially higher costs incurred when switching between a Nastran solver and a non-Nastran solver than when switching between Nastrans is reflected in a

CX-22.

MSC will argue at trial that the ANSYS solver is a competing product in the same antitrust product market as the advanced Nastrans. However, the ANSYS solver does not pose a competitive constraint in any way comparable to UAI Nastran and CSA Nastran.

CX-2365.

Furthermore, the record does not show any marked shifting between ANSYS and Nastran solvers on the basis of price, in sharp contrast to the evidence of shifts between advanced Nastran solvers.

Substantial switching costs discouraged substitution beyond other advanced Nastrans.

MSC will also point to several niche market segments where ANSYS is the preferred tool because of its robust non-linear and thermal capabilities.

MSC may also point to Dassault's stand-alone Elfini solver, another non-Nastran general purpose solver, as a competitive constraint.

In 2001, Dassault and MSC announced the strategic alliance and Dassault's acquisition

of a nine percent ownership interest in MSC to become MSC's largest shareholder.

See

CX-2282. Thus, Dassault's Elfini is not an independent competitive constraint to MSC Nastran.

MSC also will likely proffer Abaqus, , as

another solver that serves as an effective constraint on the advanced Nastrans.

. Additionally, MSC eventually acquired

MARC, another non-linear solver

Respondent will also claim that in-house solvers (that is, solvers developed by aerospace and automotive companies for their own in-house use) would defeat any attempt at charging prices above a competitive level. However, this argument is not supported by any facts. The clear trend is for firms to abandon in-house solvers for commercial solvers.

Even if the market were broadened to include other solvers that may exhibit some limited competitive interplay with advanced Nastran solvers, the basic analysis would not change. The ultimate question is not the precise boundaries of the market but whether the merger is likely to have an adverse impact on competition. *See United States v. General Dynamics Corp.*, 415 U.S. 486, 521 (1974) ("the Government is not required to delineate Section 7 markets by 'metes and bounds.'"). Even if the

market were to include other solvers, the fact remains that the suppliers of advanced Nastran within the broader solver category interact principally with each other. The mergers afford MSC the power to raise prices to an extent not possible absent the acquisitions.

At some price point, MSC might lose business to ANSYS, Abaqus, or even in-house solvers. However, these other non-Nastran solvers are not necessarily in the same relevant product market simply because in the aftermath of MSC's acquisition of its closest competitors, consumers consider them as possible substitutes. To make such an assumption is to fall victim to the "Cellophane Fallacy." "[A] monopolist . . . always faces a highly elastic demand; its products are so overpriced that even inferior substitutes begin to look good to consumers." *United States v. Eastman Kodak Co.*, 63 F.3d 95, 103 (2d Cir. 1995). See, e.g., *Pepsico, Inc. v. The Coca Cola Co.*, 114 F. Supp. 2d 243, 257 (S.D.N.Y. 2000) (the Cellophane Fallacy "cautions that '[the] existence of significant substitution in the event of further price increases or even at the current price does not tell us whether the defendant already exercises significant market power.'" (quoting *Eastman Kodak Co. v. Image Tech. Serv. Inc.*, 504 U.S. 451, 471 (1992))); *Santa Cruz Medical Clinic v. Dominican Santa Cruz Hospital*, No. C93-20613-RMW, 1995 WL 853037, at *10 & n.10 (N.D. Cal., Sept. 7, 1995) (discussing Cellophane Fallacy in context of geographic market definition) (citing Gene C. Schaerr, *The Cellophane Fallacy and the Justice Department's Guidelines for Horizontal Mergers*, 94 Yale L.J. 670, 677-78 (1984)).

2. The Relevant Geographic Market Is Comprised of the World

The second area of inquiry is to identify the "section of the country," or geographic market(s),

that may be affected by the proposed acquisitions. In this case, the relevant geographic market is likely the world, although local support may be a factor which limits U.S. consumers from turning to overseas suppliers.

3. There Is a Substantial Likelihood the Acquisitions May Lessen Competition or Tend To Create a Monopoly

After the relevant product and geographic markets are established, the next step of the inquiry under Section 7 is evaluating the impact of the acquisition on competition: that is, determining whether the proposed merger may hurt consumers by facilitating anticompetitive pricing in these markets. To aid in this predictive determination, courts look first at market concentration and the increase in market concentration created by the transaction, then examine such other factors as the nature of competition between the merging firms, other market participants, and barriers to entry. The task of predicting the competitive impact of MSC's acquisitions of UAI and CSAR is simplified in this case. MSC experienced revenue reductions and price erosion due to competition from UAI and CSAR. Without that competition, MSC is able to raise or maintain its prices and be less solicitous of the needs of Nastran users for further enhancements. Complaint Counsel will offer expert opinion testimony at trial to provide further guidance in analyzing the competitive effects of MSC's two acquisitions.

a. The Acquisitions Increased Concentration Significantly

Mergers that significantly increase market concentration are presumptively unlawful because the fewer the competitors and the bigger the respective market shares, the greater the likelihood that a single firm, or a group of firms, could raise prices above competitive levels. *See Hospital Corp. of*

Am., 807 F.2d at 1389; Merger Guidelines, § 2.0. Market concentration may be measured by determining the market shares of industry leaders or by calculating the Herfindahl-Hirschman Index ("HHI"). *FTC v. PPG Indus., Inc.*, 798 F.2d 1500, 1503 (D.C. Cir. 1986); *FTC v. University Health, Inc.* 938 F.2d 1206, 1211 n.12 (11th Cir. 1991) (HHI is "most prominent method" of measuring market concentration); *Staples*, 970 F. Supp. at 1081-82; *Cardinal Health*, 12 F. Supp. 2d at 53-54; Merger Guidelines, § 1.5.² A merger that results in an HHI over 1800 indicates a highly concentrated market; it is presumed that mergers producing an increase in the HHI of more than 100 points in such markets are likely to create or enhance market power or facilitate its exercise. Merger Guidelines, § 1.51.

In this case, the combined shares of MSC Nastran (90%), UAI Nastran (5%), and CSA Nastran (5%) are 100%, reflecting a merger to monopoly. The post-merger HHI would be at the monopoly level of 10,000. This percentage is obviously far in excess of the levels raising a presumption of illegality.

Even if the market were to include ANSYS and Elfini, the combined market share of MSC Nastran, UAI Nastran, and CSA Nastran raises competitive concern. Concentration among these firms is high and increased significantly because of the acquisitions. Using this definition, the post-merger HHI is over 3000, still far above the 1,800 level creating a presumption of illegality. In short, MSC's acquisitions are presumptively unlawful in an advanced Nastran market or a broader market that may include ANSYS or even Elfini.

² The HHI is calculated by summing the squares of the market shares of all firms in the market.

b. UAI and CSAR Had Greater Competitive Significance Than Their Market Shares Indicate

While UAI Nastran and CSA Nastran held relatively small market shares, their competitive significance was greater than their market share. UAI Nastran and CSA Nastran had a presence in MSC's largest and key account and were capable of serving large users. UAI's and CSAR's ability to serve MSC's largest customers was a signal to other customers that UAI and CSAR were viable alternatives to MSC Nastran. Indeed, firms used the availability of UAI and CSAR as leverage to secure greater discounts from MSC without actually licensing UAI Nastran or CSA Nastran. In addition, UAI was beginning to undertake new initiatives to expand the use of UAI Nastran

at the time of the acquisition. CSAR was also beginning to supply CSA Nastran at the time of the acquisition under designation of CSA Nastran as its preferred FEA solver.

UAI's and CSAR's influence were also greater than their market shares might indicate because of the threat that they would be acquired by another engineering software firm. UAI's and CSAR's potential to expand their revenue base, either alone or with a partner, had been a prime motivation for MSC to acquire them.

c. Other Evidence Confirms that MSC Will Have Greater Power to Raise Price After the Acquisitions

The acquisitions' elimination of the unique competitive relationship between MSC Nastran, UAI Nastran, and CSA Nastran is what makes the acquisitions so pernicious. The elimination of this competition will force users to pay millions of dollars in higher prices. The effect of the acquisitions will

be to reduce discounting and to eliminate falling prices for advanced Nastran. MSC also will be less willing to continue offering unlimited site agreements following the acquisition.

. See CX-2; CX-2278.

The acquisitions also provided MSC with greater ability to charge customers or groups of customers different prices depending upon their “elasticity of demand.” Prior to the acquisitions, UAI Nastran and CSA Nastran had constrained MSC from raising prices. But now that MSC has been freed of these competitive constraints it can begin to raise prices across the board or at least to the more price sensitive customers who can no longer turn to UAI Nastran or CSA Nastran in the event of a price increase.

CX-23.

CX-24.

In summary, there is direct evidence, including MSC's, UAI's, and CSAR's own contemporaneous documents, establishing that these acquisitions will result in the loss of competition to the detriment of consumers.

d. The Acquisitions Eliminated UAI and CSAR As Acquisition Candidates for Other Engineering Software Firms

MSC's acquisitions had a further anticompetitive effect by eliminating UAI and CSAR as

acquisition targets for other firms who could further expand UAI Nastran's and CSAR's Nastran's competitive presence and make the market even more competitive.

CX-1 at MS-0000699.

CX-2 at MS-0000741;

CX-15 at MSC-02 002288.

See CX-2; CX-2278 at MSC-164 000261; CX-3 at MS-008634 (

).

e. Post-Acquisition Evidence Supports MSC's Increased Exercise of Monopoly Power As a Result of the Acquisitions

The Commission and courts are cautious in evaluating post-acquisition pricing evidence because respondents can too easily manipulate prices to avoid the appearance of the exercise of market power. "Post-acquisition evidence that is subject to manipulation by the party seeking to use it is entitled to little or no weight." *Hospital Corp. of America v. FTC*, 807 F.2d 1381, 1384 (7th Cir. 1986) (Posner, J.), *cert. denied*, 481 U.S. 1038 (1987). Accordingly, the "Commission . . . was not required to take account of a post-acquisition transaction that may have been made to improve Hospital Corporation's litigating position." *Id.* at 1384; *see B.F. Goodrich Co.*, 110 F.T.C. 207, 340-41 (1988); *see also United States v. General Dynamics Corp.*, 415 U.S. 486, 504-05 (1974).

While MSC has had an incentive to avoid the appearance of reducing discounts or raising prices during the pendency of the Commission's investigation and this proceeding, MSC nonetheless has raised some prices and eliminated a popular leasing feature -- . First, MSC increased

prices to those users who had licensed UAI Nastran and CSA Nastran.

CX-1921.

There are numerous other examples where MSC has raised prices, reduced discounts, and discontinued unlimited usage site license agreements to specific users following the acquisitions.

Moreover, MSC has offered its customers more restrictive licensing terms since the acquisitions.

f. MSC's Acquisitions Satisfy All the Elements for Monopolization and Attempted Monopolization

The acquisitions of UAI and CSAR by MSC satisfies all the elements for monopolization and attempted monopolization at trial. MSC's dominant market shares prior to and after the acquisitions satisfy the showing required for monopoly power and the dangerous probability of success. Moreover, MSC acted willfully and with the specific intent to obtain and maintain a monopoly in the market for advanced versions of Nastran when it made the acquisitions.

MSC acquired UAI and CSAR both to eliminate UAI and CSAR as competitors and to remove them as acquisition targets for other firms who might make UAI and CSAR even more

formidable competitors. See CX-20; CX-14 at MS-00002031 and 00002036.

. See CX-1; CX-2.

1505).

CX-3 at MS-008634.

0036599.

Perna IH at 224, 239 (CX-

See 1914 at MS-

B. The Relevant Market Is Insulated from New Entry

The analysis of the conditions of new entry into a relevant market is part of a determination of the likely anticompetitive effects of any acquisition, because if entry is unlikely, the merged entity can raise prices without attracting new competition. See *Staples*, 970 F.Supp. at 1086. In assessing the conditions of entry, the ultimate issue is whether entry is so easy that it "would likely avert anticompetitive effects from [the] acquisition . . ." *United States v. Baker Hughes, Inc.*, 908 F.2d 981, 989 (D.C. Cir. 1990).

The Merger Guidelines articulate the conditions under which entry would likely avert anticompetitive pricing. Entry is considered "easy" if it would be "timely, likely and sufficient in its magnitude, character and scope to deter or counteract the [anti]competitive effects" of a proposed

transaction. Merger Guidelines, § 3.0, *quoted with approval, Rebel Oil Co., Inc. v. Atlantic Richfield Co.*, 51 F.3d 1421, 1440 (9th Cir.), *cert. denied*, 116 S. Ct. 515 (1995). Entry is timely if a new entrant would have a significant market impact within two years. Merger Guidelines, § 3.2. Entry is likely if it would be profitable at premerger prices. *Id.* at § 3.3. Entry is sufficient if it would be on a large enough scale to counteract the anticompetitive effects of the transaction. *Id.* at § 3.4.

There is no entry that would be timely, likely and sufficient in its magnitude, character and scope to deter or counteract the anticompetitive effects of Respondent's acquisitions of UAI and CSAR.

See CX-3.

CX-2365.

Additionally, entry is further impeded by MSC's own recent program

See CX-25;

Dep. at 206.

Since the market is mature and not expanding, any new entrant must obtain some existing customers to build its business and cannot rely upon only new customers.

MSC is likely to focus its entry arguments on the possible emergence of AI Nastran, a new Nastran being developed by Drs. Harry Schaeffer and Richard MacNeal, one of the former founders of MSC. Drs. Schaeffer and MacNeal have joined their efforts with ANSYS to offer AI Nastran. The possible emergence of AI Nastran, however, will not constrain MSC's exercise of market power for a long time, if ever.

While Dr. Schaeffer has had an interest in offering an advanced version of Nastran since learning of MSC's acquisitions over three years ago,

. In view of many years of development of the advanced versions of Nastran offered by MSC, UAI, and CSAR, for many more years, if ever.

C. MSC Will Fail To Show that the Acquisitions Will Enhance Competition by Producing Cognizable Efficiencies

The Commission considers appropriate efficiencies in evaluating a merger's likely competitive effect. Merger Guidelines, § 4.0. A respondent must show that competition will not be adversely affected by the merger. It is not enough for a respondent to show cost savings resulting from the acquisitions. "[G]iven the high concentration levels, the court must undertake a rigorous analysis of the kinds of efficiencies being urged by the parties in order to ensure that those 'efficiencies' represent more than mere speculation and promises about post-merger behavior." *Heinz*, 246 F.3d at 721. Moreover, "[e]fficiencies almost never justify a merger to monopoly or near-monopoly." Merger Guidelines § 4.

Respondent claims that the acquisitions are justified primarily by efficiencies gained from retention and employment of former developers of UAI and CSAR (from UAI and from

CSAR). MSC claims that these developers have made a substantial contribution to MSC's enhancement of MSC Nastran as well as customer-funded development projects. The evidence, however, will show that the claimed efficiencies are not likely to benefit consumers, are speculative, and can be achieved through means with less dramatic anticompetitive effect than MSC's acquisitions. As a result, efficiencies are not a defense to the anticompetitive effects likely to result from these acquisitions. *See University Health, Inc.*, 938 F.2d at 1222.

Here, Respondent's purported cost savings cannot be credited for three distinct reasons. First, they will not overcome the injury to competition resulting from these acquisitions. Indeed, these acquisitions constitute a merger to monopoly. Without the competitive rivalry provided by UAI and CSAR, the forces have been lost that have driven MSC to lower its prices and to be more responsiveness to customers' Nastran development needs. *See United States v. United Tote, Inc.*, 768 F. Supp. 1084, 1084-85 (D. Del. 1991) (rejecting efficiency defense in merger to duopoly; efficiencies insufficient to outweigh the loss of competition since "even if the merger resulted in efficiency gains, there are no guarantees that these savings would be passed on to the consuming public."); Merger Guidelines, § 4.0.

Second, Respondent has not adequately quantified the claimed efficiencies. MSC had stated during the Commission's investigation that it had not undertaken any studies or analyses of its efficiencies. *See CX-1405*. MSC's claimed efficiency is that it has employed former UAI and CSAR's developers. This compares to over total developers working at MSC. Moreover, Respondent has not sought to show, as it cannot, an increase in the total industry output of advanced Nastran enhancements and development over the level of enhancements and development occurring if

MSC, UAI, and CSAR had remained independent or been acquired by another firm. Rather, Respondent's arguments are merely litigation-driven, unfounded claims that should be viewed with considerable suspicion. Because efficiencies are difficult to verify and quantify, the role that efficiencies play in merger analysis has been carefully circumscribed. Speculative claims are not countenanced. Merger Guidelines, § 4.0.

Third, Respondent must also show that the efficiencies are specific to the acquisitions and "unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects." Merger Guidelines, § 4.0. Respondent's efficiency claims fail because any cost savings they attribute to the acquisitions can be achieved through other means that do not adversely affect competition. MSC had other ways of obtaining developers, including seeking to hire from other sources or even from UAI and CSAR, turning to overseas developers, or making other acquisitions that are not anticompetitive. It also could have taken greater steps to retain its own employees. Indeed, since 1995 MSC has lost at least 150 employees who worked on MSC Nastran development or support.

D. Divestiture of One or More Perpetual, Royalty-Free Licenses to the Current Advanced Version of MSC Nastran Is Needed to Restore the Competition that Would Have Occurred But For the Acquisitions

The purpose of a remedy in an antitrust merger case is to restore competition. Moreover, the Commission has “wide discretion” in its choice of an antitrust remedy. *See Atlantic Refining Co. v. FTC*, 381 U.S. 357, 376 (1965). Once the Court finds Respondent’s acquisitions of UAI and CSAR to be unlawful under Section 7 of the Clayton Act and Section 5 of the FTC Act, all doubts as to the remedy are to be resolved in the government’s favor. *United States v. E. I. du Pont De Nemours and Co.*, 366 U.S. 316, 334 (1961). For violations of Section 7 of the Clayton Act, divestiture is the favored remedy because it “is simple, relatively easy to administer, and sure.” *United States v. E.I. du Pont De Nemours and Co.*, 366 U.S. 316, 329-31 (1961). Divestiture of assets beyond those acquired may be required in order to put the new competitor “in the same *relative* competitive position” as the acquired firm. *Utah Public Serv. Comm. v. El Paso Natural Gas Co.*, 395 U.S. 464, 470 (1969) (emphasis added).

The remedy needed in this matter is the licensing of MSC Nastran on a royalty-free, perpetual basis to at least one and possibly two acquirers. The remedy “is simple, relatively easy to administer, and sure.” *United States v. E.I. du Pont De Nemours and Co.*, 366 U.S. 316, 329-31 (1961). It holds the best promise for restoring a competitive market where the rivalry among the advanced Nastran suppliers (including the threat that UAI and CSAR would become more formidable competitors if acquired by another firm) were pushing prices lower and leading to active further development of Nastran to meet an ever growing need among customers for further enhancements.

Licensing of MSC Nastran is necessary because merely requiring MSC to turn over the

acquired UAI and CSAR software to newcomers is not sufficient to restore competition that existed and would have evolved but for MSC's acquisitions. The UAI and CSA Nastran codes are now out of date and no longer options to restore competition. MSC terminated all development work on UAI Nastran and CSA Nastran as of the date of the acquisitions; these codes have now been surpassed by three-years of added development to MSC Nastran. MSC has released two versions of MSC Nastran since the UAI acquisitions and the most recent was a major release. Moreover, MSC is likely to make further releases of MSC Nastran before this proceeding is concluded that may require further technology to be divested. Providing prospective acquirers with only the out-of-date UAI and CSAR codes is not a remedy in these circumstances.

UAI and CSA Nastran codes have also lost any competitive advantages that they might have enjoyed with features not previously available in MSC Nastran. Since the acquisitions, MSC has added to MSC Nastran many of the previously unique features of UAI Nastran and CSA Nastran. Moreover, MSC has shifted nearly all former UAI and CSA Nastran users over to MSC Nastran. Users are now reluctant to switch back because UAI Nastran and CSA Nastran are out of date and lacking unique features and functions.

That UAI Nastran and CSA Nastran are no longer viable codes for restoring competition was confirmed by :

(CX-2274). agrees with the expert economic testimony that Complaint Counsel will present at trial addressing the need for royalty free licensing of the MSC Nastran as the appropriate remedy in this matter.

The remedy must also remove any impediments that the prospective acquirers would face in securing customers based upon MSC's . As noted above, MSC has eliminated

See CX-25; Dep. at 206.

MSC must also be ordered to rescind all paid-up licenses entered into after the acquisition where the customers wishes to switch to another Nastran supplier. Any rescision procedure must also ensure that no customer wishing to switch incurs any financial loss of its entire paid up license fee. No customer is likely willing to switch to a new Nastran supplier if it must pay again for its license.

Once a customer has sunk its money into a paid up license, it likely will only switch to a new advanced Nastran if the price is at or below the cost of the annual maintenance paid to MSC. To correct this prospective financial disincentive for switching, MSC must provide a "portability" system where the customer can carry part of its former paid-up license payment to any new Nastran suppliers.

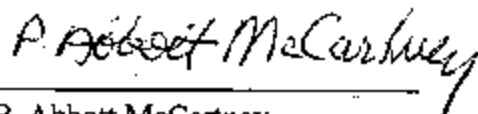
Additionally, the remedial order, at a minimum, needs to include the customary provisions contained in any Commission divestiture orders, including access to MSC developers, other technical employees, and sales personnel; customer names and information; sharing the pipeline of new

enhancements under development; and interfaces with complementary software.

MSC will argue that royalty-free, perpetual licenses for MSC Nastran and the availability of contract rescission without financial penalty to the customer are excessive measures and beyond the needs to restore the competition that would have existed but for the acquisitions. MSC's argument ignores the public interest. The foregoing remedial measures best assures that competition is restored and the public interest protected. Respondent was well aware that the acquisitions would eliminate competition and that UAI and CSAR could become even more formidable competitors if acquired by other firms. Thus, it must accept the risk for its conduct rather than the public. The restoration of competition should not be jeopardized by a possible incomplete divestiture package or cut short by contracting practices

CONCLUSION

MSC's acquisitions of UAI and CSAR may be substantially to less competition or to tend to monopoly in violation of Section 7 of the Clayton Act and Section 5 of the FTC Act.. Requiring MSC to license MSC Nastran and allowing customers to rescind paid-up licenses are remedial provisions needed to restore immediately the competition that would have occurred but for the acquisitions. Other relief should also be ordered as necessary.



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CERTIFICATE OF SERVICE

This is to certify that on June 20, 2002, I caused a copy of Complaint Counsel's Pre-Trial Brief (Public Version) to be served on the following persons:

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