

UNITED STATES OF AMERICA
BEFORE FEDERAL TRADE COMMISSION



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

Docket No. 9299

MSC's RESPONSE TO ANSYS's MOTION TO LIMIT SUBPOENA DUCES TECUM

Since MSC filed its Response to ANSYS's Motion for an Extension of Time, ANSYS has retreated from its prior position that it has "*nothing* of relevance" to contribute to this case. ANSYS now admits that (i) it "competes with MSC's Nastran Solver" for new customers, (ii) there are "enormous volumes of [responsive] material" that would establish what should be – in ANSYS's view (but apparently not in Complaint Counsel's view) – this "uncontested fact;" (iii) ANSYS has successfully competed for existing MSC customers; and (iv) it is entering what Complaint Counsel refers to as the "advanced Nastran-market." (ANSYS Br. at 12; Wheeler Aff. ¶ 6).

Yet, ANSYS continues to resist the discovery that will prove the extent of this competition and its effect on MSC's prices. As one of MSC's strongest competitors, ANSYS has substantial evidence directly controverting the core allegations of Complaint Counsel's case, including Complaint Counsel's unfounded allegations that other solvers are not competitive, that switching to other solvers is difficult, and that entry is unlikely. (See Complaint ¶¶ 19, 26-27; see also Nov. 8, 2001 Hr'g, at 11:22-12:6 (asserting that non-Nastran based solvers do not compete with MSC)).

Despite its resistance, the parties are not as far apart as ANSYS's motion tries to make it appear. In fact, MSC believes that there are only two issues for which it needs the assistance of the Administrative Law Judge.¹

First, MSC believes that ANSYS has unreasonably narrowed its search to 19 employees, excluding most of ANSYS's North American Sales Organization.² ANSYS's proposed search would exclude most of the individuals that have contact with, or oversight responsibilities for,

¹ ANSYS raises a number of non-issues in its Motion to Limit the Subpoena. For example, ANSYS is seeking to avoid searching e-mails that reside on back-up tapes. MSC has no objection to this, given that ANSYS has represented that it has (or will) search its e-mail server, which does not automatically delete e-mails unless such e-mails are deleted by the user. At the time of the January 17, 2002 meet and confer, ANSYS's counsel stated that he did not know whether ANSYS would be searching that server or whether there was any automatic deletion of e-mails. ANSYS's representations – made for the first time in its Motion to Limit the Subpoena – resolves this issue of the search of back-up tapes to MSC's satisfaction. In addition, in the interests avoiding further debate, MSC is willing to excuse ANSYS from producing documents in response to Specification Nos. 22 and 29.

However, in representing that it is searching its employees' hard-drives or the company's e-mail server, ANSYS has not described in sufficient detail the "computer generated" search it plans to undertake. MSC believes that ANSYS's proposed search will only capture e-mails and documents that use "magic" words in the title of the document or in "subject" or "re" line of the e-mail, rather than in the body of the document. Thus, MSC requests that ANSYS be Ordered to provide the instructions governing the computer search of employees' hard-drives and the company's e-mail server, and that, if the search is inadequate, MSC be permitted to raise the issue by motion. *See Larouche v. Department of the Treasury*, 2000 WL 805214, at *5 (D.D.C. Mar. 31, 2000) ("To prove the adequacy of a search," responding party should submit "non-conclusory ... affidavits that [describe] search methods."), *amended in part on other grounds*, 2000 WL 33122742 (D.D.C. Nov. 3, 2000).

² It is important to note that ANSYS does not intend to task any individual to go from office to office to search for and collect responsive documents. Instead, ANSYS has simply issued a directive to these 19 employees to forward documents responsive to the limited categories of documents identified in ANSYS's Motion to Limit the Subpoena. Thus, ANSYS has not only unilaterally narrowed the scope of the subpoena, but it has employed a methodology for which there is no way to ensure a thorough search of files. This stands in stark contrast to MSC, which has tasked its counsel to physically search approximately 100 different employees' files in multiple locations in addition to taking other steps to collect responsive documents.

the customers that are at issue in this case. (See Complaint Counsel's Responses to MSC's First Set of Interrogatories (listing a few of the relevant customers)). ANSYS does not deny that these employees are reasonably likely to have responsive documents. Thus, ANSYS should be ordered to expand its search to include the people identified below and in the Proposed Order submitted with this brief. See *Danis v. USN Communications, Inc.*, 2000 WL 1694325, at * 25 (N.D. Ill. Oct. 20, 2000) (directing that "search [focus] on the places where it is 'most likely that [the] document[s] will be found.'"); *Radetsky v. Binney & Smith, Inc.*, 1989 WL 234026, at * 13 (S.D.N.Y. Dec. 13, 1989) (requiring search for documents "in *all* places where [responsive] information might be found.")³

Second, MSC seeks the assistance of the Administrative Law Judge in ensuring that it obtains the documents that are relevant to MSC's defenses, but which are excluded under ANSYS's proposed search. See *Teague v. Scott*, 60 F.3d 1167, 1172 (5th Cir. 1995) ("Denial of an opportunity for discovery is an abuse of discretion when the discovery is necessary to fully develop the facts of a claim.").

Since the beginning of the meet and confer process, ANSYS has consistently rebuffed MSC's efforts to obtain documents that go beyond specific bidding situations between ANSYS's Solver and MSC.NASTRAN for existing customers. As to new customers, ANSYS claims that there are *too many* documents evidencing this competition. But there is no basis for withholding documents simply because they negate ANSYS's and Complaint Counsel's position in this litigation.

ANSYS's efforts to hide from view other documents relating to competition between the two companies is also without merit. ANSYS is a significant competitor that has partially or completely displaced MSC.NASTRAN or forced MSC to respond competitively at numerous

³ Unless otherwise specified, all emphasis added and all internal citations omitted.

customers, such as Pratt & Whitney (from whom ANSYS has a video testimonial on its website declaring ANSYS's technical superiority over "other software tools"), General Motors, Delphi Automotive, John Deere, General Electric, Raymond Corporation, McCaulley Aircraft, Hubbell Power Systems, and Rolls Royce engines.

Indeed, it is clear that many of ANSYS's competitive strategies – from its pricing to its product development (including its strategic relationship with SAS to develop and market a Nastran-based solver) – are designed to attack the package of products and services offered by MSC. As such, ANSYS's attempt to limit the definition of the relevant market – a definition Complaint Counsel itself has used in issuing discovery requests – should be rejected.⁴ Instead, ANSYS should be ordered to supplement its search for relevant and responsive documents in the manner described in detail below and in the Proposed Order attached to this Brief.

These two small modifications – whom to ask and what to ask for – to ANSYS's Proposed Search is all that is necessary to provide MSC with the evidence it needs to prepare its case and present its defenses.⁵ MSC has worked diligently to narrow the scope of the subpoena, and believes that the burden on ANSYS from these two modifications is minimal and certainly outweighed by the strong public interest of permitting "liberal discovery" of the primary market participants in this government antitrust suit. *U.S. v. Dentsply Intern., Inc.*, 2000 WL 654286, at *4 (D. Del. May 10, 2000) ("Liberal discovery is particularly appropriate in a government antitrust suit because of the

⁴ See Complaint Counsel's First Request For Production and Things Issued to MSC (defining relevant product and service as "Nastran and FEA software and any services provided in connection with or relating to either Nastran or FEA software").

⁵ There are obviously other issues raised by ANSYS's Motion, all of which are discussed below, but resolving the propriety of these two modifications is, from MSC's perspective, critical to its defense of the case.

important public interest involved.”); *EGH, Inc. v. Blue Cross & Blue Shield of Oregon*, 1991 WL 198601, at *1 (D. Or. Sept. 26, 1991) (“There is a general policy of allowing liberal discovery in antitrust cases.”).

I. FULSOME DISCOVERY FROM ANSYS, WHICH IS ONE OF MSC’S STRONGEST COMPETITORS, IS NECESSARY AND APPROPRIATE.

As MSC pointed out in its Response to ANSYS’s Motion for an Extension of Time, ANSYS is one of MSC’s strongest competitors. Faced with the “realities” of its own documents (which MSC attached to its Response), ANSYS no longer denies that it competes aggressively against MSC. As Michael J. Wheeler, Vice President of ANSYS’s Mechanical Business Unit, now admits in his affidavit, “the ANSYS Solver *competes* with MSC’s Nastran solver” and that “for ... new users, the ANSYS Solver and the Nastran Solver are both suited for many of the same applications”⁶ (Wheeler Aff. ¶ 6). This admission – by an individual listed on the FTC’s witness list – defeats Complaint Counsel’s primary argument for the existence of an “Advanced Nastran” market based on the differing functionalities of the ANSYS and MSC solvers.⁷

⁶ Complaint Counsel’s theory that there are large, complex problems for which Nastran is needed is belied by the customer testimonials on ANSYS’s website. (*See Using FEA to Simulate a Space Mission*, www.ansys.com/customer_pratt.htm (attached at Tab A) (“Computing power limited the use of analysis in the past ..., but now that hurdle has been overcome with the purchase of a variety of high-powered workstations and the computational efficiency of ANSYS’ new PowerSolver.”).

⁷ Because ANSYS admits it competes directly against MSC.NASTRAN, it must be included in the relevant market. *See In re R.R. Donnelley & Sons Co.*, 1995 WL 461663 (F.T.C. July 21, 1995) (because many customers would switch from gravure printing to offset printing, competitors offering offset printing services must be included in the market); *United States v. Gillette Co.*, 828 F. Supp. 78 (D.D.C. 1993) (merger of fountain pen companies must be analyzed in the context of the broader market that includes other writing instruments); *Pennsylvania v Russell Stover Candies, Inc.*, 1993 WL 145264 (E.D. Pa. May 6, 1993) (merger of premium gift boxed chocolates sold through mass merchandisers must be analyzed in broader confectionary market).

In fact, recognizing that ANSYS and MSC both offer comparable functionality, ANSYS has now taken the position that the market definition issue rests exclusively on a *Kodak*-style lock-in argument.⁸ (See ANSYS Br. at 2, 4). But ANSYS also admits that it *does compete* for existing MSC customers.⁹ In fact, in a video testimonial available directly on ANSYS's website, Pratt & Whitney explains that:

“We had used a wide suite of software including NASTRAN, MARC, and ANSYS. We started looking at ANSYS back in 1989. We got a few seats in for evaluation. And over about a 10 year period, ANSYS took over and became the tool of choice.... Now it is used almost exclusively.... It's a complete integrated package. You don't need a separate pre-processor or separate solver or post-processor, like a lot of the other tools in the industry.”

See http://www.ansys.com/customer_stories/testimonials/joemetrisin.htm (video link).

Unlike CSA and UAI, ANSYS is a fully viable, growing, and increasingly strong competitor for MSC's customers. In part, this is because ANSYS offers a “suite” of software and services that permits it to offer integrated solutions and a menu of features. This enables ANSYS to

⁸ Even ANSYS's lock-in theory, however, is factually and legally insufficient to exclude ANSYS from the relevant market. Before excluding ANSYS from the market, Complaint Counsel would have to demonstrate that existing customers (i) relied on the presence of UAI and CSA when making the initial selection to choose MSC.NASTRAN, (ii) could not switch to other non-Nastran-based solvers; and (iii) failed to recognize this inability at the time of purchase. See *SMS Sys. Maint. Servs., Inc. v. Digital Equip. Corp.*, 188 F.3d 11, 17 (1st Cir. 1999) (“a litigant who envisions the aftermarket as a relevant market must advance hard evidence dissociating the competitive situation in the aftermarket from activities in the primary market.”). Because customers could – and did – switch to alternatives such as ANSYS, neither ANSYS nor Complaint Counsel can dissociate ANSYS from the relevant market.

⁹ See Wheeler Aff. ¶ 7 (simply noting that the bulk, not all, of ANSYS's Solver sales does not involve competition with Nastran-based solvers). Of course, Wheeler's carefully worded affidavit does not reveal its support for such a statement, nor does it identify the definitions Mr. Wheeler used in determining which sales are made based on competition of any kind, versus which sales are made under long-term, pre-negotiated contracts. In any event, it is clear that MSC competes against ANSYS for existing customers far more than it ever competed against either UAI or CSA.

compete against MSC.NASTRAN and MSC's other complementary products and services.¹⁰ Indeed, ANSYS is continuing its attack on MSC and other solvers by entering into a strategic alliance with SAS to develop and market a Nastran-based solver.¹¹ This is further evidence of ANSYS's desire to add functionality and provide customers with a more complete solution.

There are numerous cases that establish that the sale of a package of goods and services – if that is what customers consider in making their purchasing decision – constitutes the relevant product market. The Government, in cases such as *Philadelphia National Bank*, have used this market reality offensively to eliminate smaller competitors that could not viably offer the complete package from the market. Defendants – who have acquired niche products in their area of competence – have used this same concept defensively to broaden the market to include the true significant competitors. *United States v. Central State Bank*, 817 F.2d 22, 24 (6th Cir. 1987) (rejecting narrow market definition because the “government failed to factually support its claim that existing circumstances ... warranted a departure from the definition of the relevant product market as the cluster of banking services traditionally offered in the commercial banking industry.”); *see also*

¹⁰ ANSYS's own website demonstrates that ANSYS has sought to compete against MSC on the basis of its product “suite,” not just its ANSYS Solver. *See ANSYS/Multiphysics*, www.ansys.com/ansys/multiphysics.htm (attached at Tab B) (“Tired of cluttering up your platform with combinations of different software packages in order to get all the simulation capabilities you need? Ready to step up to the ultimate in design simulation and virtual prototyping software? ANSYS/Multiphysics integrates the best structural, thermal, CFD, acoustic, and low-/high-frequency electromagnetic simulation capabilities in one software bundle. It's like getting the entire ANSYS simulation suite in one convenient package.”).

¹¹ According to ANSYS's website, the Nastran-based solver it plans on jointly developing and marketing is “being developed in coordination with key aerospace and automotive companies, providing additional guidance about the core capabilities needed.” *See ANSYS, Inc. and SAS LLC Enter Into Strategic Nastran Partnership*, (Nov. 27, 2001) (attached at Tab C). Thus, ANSYS recognizes that customers who use MSC.NASTRAN could switch to ANSYS, just as companies like Pratt & Whitney have done.

Hamilton Chapter of Alpha Delta Phi, Inc. v. Hamilton College, 106 F. Supp. 2d 406, 412 (N.D.N.Y. 2000) (rejecting plaintiffs’ narrow market definition because the evidence demonstrates that customers “consider a cluster of services.”); *SMS Sys. Maint. Servs.*, 188 F.3d at 18 (“market power ... must be assessed by weighing the complete package of primary equipment, parts, and services.”).

Here, MSC competes aggressively against ANSYS, Dassault, HKS, SORC, PTC and others in providing the complete package of software products and services that satisfy customers’ FEA solving needs. (See, e.g., ANSYS Br. at 5; Wheeler Aff. ¶ 10 (noting that Dassault also offers a “close[] substitute” for MSC’s Nastran Solver)). This is something CSA and UAI could never do, but something on which ANSYS has staked its business model.

Because ANSYS is a strong competitor in the market place, it has highly relevant documents, not only concerning the specific instances of competition between MSC and ANSYS (of which ANSYS has taken an unreasonably narrow view) but also concerning (i) its views of the relevant market place; (ii) its strategies in pricing its products and competing in this marketplace; and (iii) its efforts to enhance its product portfolio to better compete against MSC in offering the full array of products and services sought by customers looking for FEA solvers. See *Brown Shoe Co. v. United States*, 370 U.S. 294 (1962) (recognizing that the views of industry participants is relevant to the issue of market definition).

Because ANSYS is likely to have relevant information, MSC is entitled to discovery that goes beyond the narrow search contemplated by ANSYS. Courts have “long recognized that a substantial burden of compliance [in antitrust cases is] justified by the nature and importance of the inquiry involved” and that “considerations of cost and burdensomeness must give way to the search

for truth in this case of undoubted importance to the public weal.” See *United States v. International Business Machines Corp.*, 83 F.R.D. 97, 109 (S.D.N.Y. 1979) (collecting cases). For this reason, “[l]iberal discovery is particularly appropriate in a government antitrust suit....” *Dentsply*, 2000 WL 654286, at *4.

As explained below, the subpoena MSC served on ANSYS is reasonably calculated to lead to the discovery of such evidence, and it should be enforced with the modifications suggested in this brief. *In re Vitamins Antitrust Litig.*, 2001 WL 1049433, at *11 (D.D.C. June 20, 2001) (“It is well-established that parties are entitled to discover not only admissible evidence but also information that is ‘reasonably calculated to lead to the discovery of admissible evidence.’”); *Dentsply*, 2000 WL 654286, at *4 (“Relevance has been construed liberally under Rule 26(b)(1), to ‘encompass any matter that bears on, or that reasonably could lead to other matter[s] that could bear on, any issue that is or may be in the case.’”).

II. ANSYS SHOULD BE ORDERED TO EXPAND ITS SEARCH TO INCLUDE INDIVIDUALS THAT ARE LIKELY TO HAVE RESPONSIVE INFORMATION.

ANSYS has refused to appoint any individual to systematically search through the files of key employees that are likely to have responsive information. Instead, ANSYS has simply asked a select number of employees to forward documents responsive to their limited requests. This method of searching for documents is prone to error because there is no systematic search for documents. In fact, the problems associated with this slipshod search is evident by the fact that ANSYS has only collected four boxes of responsive documents, while admitting that there is an “enormous” volume of documents that relate to competition between MSC and ANSYS. See *United States v. Metropolitan Disposal Corp.*, 622 F. Supp. 1262 (D. Or. 1985) (“MDC's failure to place

a knowledgeable employee or officer in charge of the search and MDC's failure to conduct an adequate search for the documents goes far beyond the scope of 'oversight.'"); *see also Baltimore Scrap Corp. v. David J. Joseph Co.*, 1996 WL 720785 (D. Md. 1996) (ordering a re-search of third-party's files in part because of the "small volume of documents produced.")

Be that as it may, the most fundamental problem associated with ANSYS's search for documents is not their methodology, but the number of people which ANSYS has asked to produce relevant documents. ANSYS has asked for documents from only the very top levels of its organization, and it has excluded most of its North American Sales Organization. Indeed, ANSYS has not requested documents from any of the people that have direct contact with the customers whose purchases of FEA solver software is directly at issue, customers such as Lockheed Martin, NASA, Pratt & Whitney, Rolls Royce, GE Power Systems, Ford, GM, and others.

ANSYS's only purported reason for not extending the search beyond these 19 individuals is that they are the people to whom ANSYS would turn "in the ordinary course of its business ... to obtain [the requested] information. (*See* ANSYS Proposed Order ¶ 3). But that argument is meritless. First, while ANSYS (if it can be treated as an "actor" in this context) would turn to these top individuals to obtain answers to specific information, those individuals could be reasonably expected to turn to their direct reports, who would then turn to their direct reports for answers. Here, ANSYS does not intend to follow the chain downward beyond these top individuals, many of whom may or may not maintain extensive files. Second and relatedly, MSC is not looking for "answers" to questions – as MSC is not permitted to propound interrogatories on ANSYS – but it is looking for evidence. And that evidence can reasonably be expected to reside in the files of lower-level employees. *Shoen v. Shoen*, 5 F.3d 1289, 1292 (9th Cir. 1993) ("Th[e] broad right of

discovery is based on the general principle that litigants have a right to ‘every man’s evidence,’ ... and that wide access to relevant facts serves the integrity and fairness of the judicial process by promoting the search for the truth.”).

ANSYS cites no authority for its refusal to search for responsive documents in the places it knows they are likely to be found. The courts require entities “served with a subpoena ... to conduct a reasonable search to ensure that non-privileged documents that are relevant or likely to lead to the discovery of admissible evidence are produced.” *Alexander v. F.B.I.*, 186 F.R.D. 21, 38 (D.D.C. 1998). The well-settled rule authorizing the production of documents contemplates “the broadest sweep of access, inspection, [and] examination ... of documents ... in the possession of third-parties.” Wright, Miller & Marcus, *Federal Practice & Procedure*, Vol 8A, § 2206 (1994); *see also* Fed. R. Civ. P. 45, Advisory Comm. Note, 1991 Amendments (“[t]he non-party witness is subject to the same scope of discovery under this rule as that person would be as a party to whom a request is addressed pursuant to Rule 34.”). At a minimum, this means that ANSYS must search those employees’ files (including any shared files and the files of the relevant administrative assistants) where the responsive documents are likely to be found.

Because ANSYS is simply asking individuals with responsive documents to forward them to ANSYS’s counsel for review and production, adding a few more names to the list is not unduly burdensome. If these individuals do not have responsive documents, then asking them to certify that they have no responsive documents is hardly a burden. And if, as we expect, these individuals do have responsive documents, ANSYS has no basis for refusing to produce them.¹²

¹² ANSYS claims that the people involved in its North American Sales Organization – people with titles such as Director of Strategic Accounts and Major Account Representative – perform only ministerial tasks and would have no responsive information in their files. It is hard to believe that this

Thus, MSC requests that ANSYS be ordered to expand its search to include the following individuals: Bill Bryan, David Sonnet, Lynn Rowles (and her direct reports), Ravi Kumar, John Priess, Less Stobler, Andy Farrington, Rex Dixon, Scott Hanratty, Bert Murray, John Terens, Terry Hurley, Gerry Kyle, Peter Kingman, Janet Swaysland, Stephen Scampol, Stephen Meinshein, Andy Bowe, Mark Swenson, Lisa Kitts, Mike Odel, Robert Bayes, Janet Wolf, Karen Love, Chuck Norton, Cliff Bliss, Brian Tabert, Jeff Spire, Glenn Hartung, Kim Kirley, and Raiza Lolia. In addition, ANSYS should be ordered to search all marketing or sales people having any responsibility for the following customers (including their divisions and affiliates) or for the regional ANSYS Support Distributors (ASDs) that deal with such customers: Allison Engines, Altair, Boeing, Caterpillar, DaimlerChrysler, Delphi, DERA, U.S. Department of Defense, Embraer, Ford, General Motors, General Electric, Honeywell, Hubbell Power Systems, Hughes, John Deere, Lockheed, McCaulley Aircraft, NASA, U.S. Navy, Northrop Grumman, Orbital, PLM Solutions, Pratt & Whitney, Raymond Corporation, Raytheon, Robert Bosch Corp., Rolls Royce, and TRW Space and Electronics. ANSYS should also be ordered to send an e-mail to all its employees residing in the United States asking them to forward responsive documents or respond that they have no such documents in their possession, custody, or control.

III. ANSYS SHOULD BE ORDERED TO EXPAND ITS SEARCH FOR DOCUMENTS THAT ARE HIGHLY RELEVANT TO MSC'S DEFENSES AND THAT ARE CURRENTLY OMITTED FROM ANSYS'S PROPOSED SEARCH.

The second serious flaw in ANSYS's proposed search is that it unreasonably limits the substantive scope of search to exclude highly relevant evidence. Rather than asking the selected individuals to forward all documents that are responsive to the subpoena, ANSYS has taken it upon

is true, but even if it is, there is only one way to find out for sure: Ask them!

itself to redraft the subpoena. But in so doing, ANSYS has excluded categories of documents that MSC needs to prepare its case. In fact, because ANSYS has carefully worded its Proposed Search, it is not entirely clear which types of documents it seeks to exclude from the Subpoena. For example, is there any difference between documents that discuss “competition between a Nastran-based solver and ANSYS” on the one hand, and documents that discuss competition between MSC and ANSYS on the other? The latter category is obviously relevant, but appears to be excluded from ANSYS’s Proposed Search. Similarly, it is not clear whether documents discussing ANSYS’s strategy in the FEA solver market relate to specific instances of bidding “competition” between ANSYS and a Nastran-based solver. These are documents that are obviously relevant.

The specific infirmities of ANSYS’s proposed modifications to the subpoena are discussed below. But rather than parse through the meaning of all of ANSYS’s qualifying language, MSC simply proposes that ANSYS be ordered to supplement its Proposed Search by including the following seven categories of documents:

- Documents relating to competition between MSC and ANSYS in the FEA solver market, including marketing strategies, sales training materials, market research and benchmark studies;
- Documents relating to Nastran, including all documents that discuss SAS, ANSYS’s supposed “lock-in” theory, the existence of an “Advanced Nastran” Market, or switching costs or inertia against changing from Nastran-based products;
- Documents relating to ANSYS’s pricing and competitive strategies in the FEA solver market;

- Documents relating to ANSYS's consideration of potential acquisitions of competitors in the FEA solver or MCAE market, including, but not limited to MSC;¹³
- A list that identifies the customers currently purchasing ANSYS's Solver, alone or in conjunction with other ANSYS products or services;
- Financial information showing ANSYS's current and future forecasted revenues, profits, and margins for each product; and
- Electronic data that identifies the amounts each customer paid for any ANSYS product or service during the relevant period, so as to permit MSC's experts to conduct cross-elasticity analyses.

MSC believes that, by supplementing ANSYS's Proposed Search in this way, ANSYS will be able to provide the evidence MSC deems critical to its case while minimizing its burden. In that regard, it is important to remember that, with few exceptions, MSC is only seeking information in the files of the 19 people ANSYS identified and the few additional people discussed above.¹⁴

¹³ ANSYS claims that such documents are not relevant, but as discussed below, there has been an on-going race over the past decade to expand the array of services and features offered either through internal development, acquisition, or strategic partnerships. Any gaps between different FEA solving companies are quickly disappearing, and documents that discuss ANSYS's need to acquire niche products or acquire additional capabilities – as MSC has done with its acquisitions of MARC, PDA, UAI, Knowledge Revolution, and CSA – to compete in the FEA/MCAE market is highly relevant.

¹⁴ ANSYS has already agreed to search its investor relations department for information responsive to Request Nos. 12 and 13, and MSC recognizes that ANSYS may have to obtain the electronic sales information, customers lists, and financial information from its Information Technology department. But these are targeted and specific requests, which should not unduly burden ANSYS. ANSYS has also requested that if it is ordered to comply with the subpoena that MSC be ordered to pay ANSYS's costs. But because MSC has substantially narrowed the subpoena – and because it is not insisting on a burdensome search methodology ANSYS's cost constitute nothing more than the mere cost of doing business.

IV. ANSYS's PROPOSED SEARCH SUFFERS FROM FATAL INFIRMITIES UNLESS MODIFIED AS DISCUSSED ABOVE.

A. ANSYS's Request to Redefine the term "Relevant Product or Service" Should be Denied.

ANSYS argues that the subpoena should be modified to alter the definition of "Relevant Product or Service." As now defined, the definition of relevant product or service includes those products that constitute an FEA solver or are sold in connection with FEA solvers. This definition is perfectly appropriate.

First, MSC believes that this is a more appropriate market in which to analyze MSC's acquisition of UAI and CSA that Complaint Counsel's made up "Advanced Nastran market." ANSYS's effort to redefine the term "Relevant Product or Service" assumes that MSC has lost the market definition battle on the merits. It has not, and MSC is entitled to obtain and present evidence showing the true market realities of customers purchasing practices and competitors' strategies. The fact that Complaint Counsel has chosen to narrowly focus on some ill-defined market called "Advanced Nastran" does not make evidence relating to the overall FEA market irrelevant. To the contrary, because customers are seeking FEA solver software from full service software companies, the nature and extent of each competitors' offerings are highly relevant. Indeed, ANSYS's own SEC filings make clear that it competes in "the market for computer-aided engineering ('CAE') analysis software," which is "intensely competitive" primarily because of competition from "MSC Software Corporation and Hibbitt, Karlsson and Sorensen, Inc." *See* ANSYS, Inc. 10-K, filed March 28, 2000 (attached at Tab D).

Second, ANSYS's ignores the fact that MSC's right to discovery goes beyond the mere identification of instances where ANSYS and MSC butt heads in the marketplace. It is well-

established that the right of discovery is broader than the definition of the relevant market. *Kellam Energy, Inc. v. Duncan*, 616 F. Supp. 215, 219 (D. Del. 1985) (antitrust case stating that “regardless of how [the] geographic market is eventually defined in this action, the boundaries of that market do not set the geographic limits of discovery”); *Price v. Howard County Gen. Hosp.*, 950 F. Supp. 141 (D. Md. 1996) (rejecting attempts to redefine what documents are relevant based on the assertion that the third-party is not part of any relevant market). Even despite Complaint Counsel’s unrealistically narrow definition of the relevant market in the Complaint, Complaint Counsel recognizes that broader discovery is necessary in order to fully understand the competitive dynamics affecting MSC. (See Complaint Counsel’s First Request For Production and Things Issued to MSC at 3 (defining relevant product and service as “Nastran and FEA software and any services provided in connection with or relating to either Nastran or FEA software.”)).

Just as Complaint Counsel is entitled to evidence from MSC relating to the FEA solvers and related software and services, MSC is entitled to obtain the evidence in ANSYS’s possession relating to competition in the FEA solver market. ANSYS’s attempt to limit MSC’s ability to present such evidence by redefining what it considers to be the “relevant product or service” is simply improper.

B. ANSYS’s Request to Limit Requests 14-20, 22, and 24-26 Should Be Denied.

Based on in part on its improper redefinition of the relevant market and in part on its desire to withhold the documents relating to competition between the two companies, ANSYS seeks to limit Requests Nos. 14-20, 22, and 24-26. For the reasons discussed above, this attempt should be rejected. These requests are narrowly tailored to obtain highly relevant evidence. ANSYS’s proposed limit would exclude:

- Documents relating to competition for new customers, of which ANSYS admits it has an enormous volume;
- Documents that discuss competition between ANSYS and MSC as a whole, or which discuss ANSYS's strategies at an abstract level, without mentioning Nastran-based solvers by name;
- Documents that discuss competition between ANSYS's products and services that compete against MSC.NASTRAN for Windows (Request Nos. 3, 21);
- Top level documents relating to ANSYS's competitive strategies in the FEA solver market, and even many of ANSYS's efforts to compete against MSC within that market (Request Nos. 14-15, 18);
- Documents that discuss ANSYS's pricing strategies (Request No. 17);
- Plans by other FEA solver companies to enhance their functionality to provide a greater array of offerings within the FEA solver market, and which ANSYS believes is necessary to respond competitively to maintain its position as a viable competitor (Request Nos. 16, 20, 22); and
- Documents that support or undermine ANSYS's theory that customers are locked-in to MSC.NASTRAN, but which do not relate to a specific competitive instance where MSC and ANSYS competed (Request No. 19, 24).

Such limitations on MSC's ability to obtain these highly relevant documents are improper and should be rejected.

C. ANSYS's Request to Limit Specification 3 Should Be Denied.

Request No. 3 requests that ANSYS produce "all documents relating to MSC." ANSYS proposes to limit request No. 3 to documents relating to "solvers." MSC has no objection to limiting Request No. 3 to documents relating to the "Relevant Product or Service" as defined in the subpoena. But ANSYS's attempt to further limit Request No. 3 is unjustifiable. If ANSYS has documents that discuss MSC in the context of the "Relevant Product or Service," MSC is entitled to such evidence.

ANSYS claims that it sells some products that do not compete against MSC.NASTRAN. Those products include ANSYS Consulting Services, the DesignSpace family of products, the AI*SOLUTIONS family of products (AI*EMAX and AI*WORKBENCH), the ICEM CDF family of products, and the family of products developed by ANSYS' CADOE division. MSC does not object to ANSYS's request to exclude documents that relate exclusively to the sale of AI*EMAX, the ICEM CFD family of products, or the family of products developed by ANSYS's CADOE division. But MSC believes that ANSYS's Consulting Services, the DesignSpace family of products, and AI*Workbench are used, either as a selling point or as complementary products, to enhance the likelihood that customers will purchase ANSYS's flagship solver over MSC.NASTRAN and related products. Thus, responsive documents relating to these products should be produced. In addition, MSC believes that ANSYS should produce all documents that discuss either (i) ANSYS's Suite of software products, or (ii) any other software and services sold to customers using or contemplating using ANSYS's solver.

D. ANSYS's Request to Delete Specification Nos. 11 and 23 Should Be Denied.

Request No. 11 seeks financial information by product line for ANSYS. ANSYS argues that it "does not maintain such document by product line," and that "ANSYS reports such information for ANSYS as a whole." It simply strains credulity to assert that ANSYS lacks any information concerning its revenues by product line, even if it reports consolidated numbers to the public. Keeping information from the investing public is not a basis for withholding it from discovery. ANSYS should be required to produce, as requested, documents sufficient to show – by product line – its revenues, costs, margins, and profits, capital expenditures, and sales and profit forecasts. If ANSYS claims – after conducting a reasonable search – that it has no documents showing any of this

information, then it will have nothing to produce. But in that case it does not need an Order from the Administrative Law Judge quashing this perfectly reasonable request.

ANSYS alternatively argues that such information is of “minimal relevance” to the issues in this litigation. ANSYS is wrong. Its own internal documents discuss ANSYS’s sales, revenues, and growth as selling points that it uses to compete against MSC. Moreover, ANSYS’s success in the market place – as shown by its financial information – will demonstrate that ANSYS is a fully viable and significant competitor of MSC, unlike UAI and CSA.

E. ANSYS’s Request to Withhold Documents Relating to its Negotiating Strategy with Respect to Its Litigation-Driven Offer to Purchase Nastran-Based Products From MSC Should Be Denied.

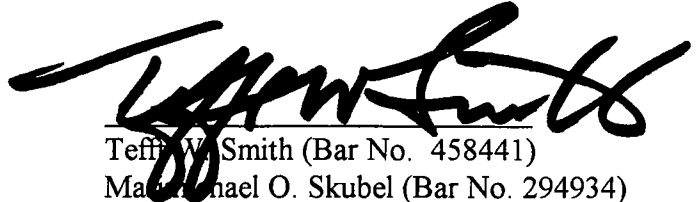
Finally, ANSYS seeks to withhold documents relating to its offer to purchase certain Nastran-based products from MSC. The fact is that ANSYS offered a mere \$500,000, not only for the UAI and CSA codes, but for the right to distribute MSC’s core Nastran products. This demonstrates two things: First, it demonstrates that competitors, such as ANSYS, are using the litigation to obtain an unfair advantage in the marketplace. Second, it demonstrates ANSYS’s belief that it does not need the UAI and CSA codes to develop and market a Nastran-based solver in conjunction with SAS. In either event, documents relating to ANSYS’s offer to MSC for the sale of Nastran-based codes or licenses are highly relevant. Because there is a Protective Order in this case, ANSYS’s confidentiality objections have no merit.¹⁵

¹⁵ ANSYS has objected because ANSYS sent a copy of its prior offer to MSC’s antitrust counsel, thereby involving MSC’s antitrust counsel in the negotiations. But ANSYS’s unilateral decision to provide MSC’s antitrust counsel with a copy of that offer cannot be a basis for refusing to produce documents that go directly to the value of the codes Complaint Counsel wants divested. In any event, there are no on-going negotiations with ANSYS (nor were there any “negotiations,” as ANSYS’s proposal was rejected immediately). Nor are there likely to be further negotiations given ANSYS’s insistence of obtaining a royalty-free license to distribute MSC’s core Nastran product, which MSC

V. CONCLUSION

For the foregoing reasons, ANSYS's Motion to Limit the Subpoena should be denied, and ANSYS should be ordered to comply with the subpoena with the modifications detailed in the attached Proposed Order.

Respectfully submitted,



Jeffrey W. Smith (Bar No. 458441)
Michael O. Skubel (Bar No. 294934)
Michael S. Becker (Bar No. 447432)
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(202) 879-5200 Facsimile

*Counsel for Respondents
MSC Software Corporation*

Dated: January 25, 2002

has spent over 30 years developing. However, in the unlikely event that ANSYS chooses to submit a good faith offer in the future for the UAI and CSA codes, it can – and hereby has permission – do so without involving MSC's antitrust counsel.

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

In the Matter of:)	
)	
MSC.SOFTWARE CORPORATION,)	Docket No. 9299
)	
a corporation.)	

[PROPOSED] ORDER

UPON CONSIDERATION of Third-Party ANSYS, Inc.’s Motion to Limit Subpoena *Duces Tecum* Served by MSC.Software Corporation,

IT IS HEREBY ORDERED that ANSYS’s Motion is Granted In Part, and Denied In Part.

IT IS FURTHER ORDERED that ANSYS’s shall be excused from searching backed-up tapes of its e-mail server, and that it shall be excused from responding to Specification Nos. 22 and 29 of the subpoena served on ANSYS by MSC;

IT IS FURTHER ORDERED that ANSYS shall search for and produce all the documents called for the search outlined on pages 8 and 9 of its Motion. In addition, ANSYS shall supplement it search by looking for, and producing, the following documents:

- Documents relating to competition between MSC and ANSYS in the FEA solver market, including marketing strategies, sales training materials, market research and benchmark studies;
- Documents relating to Nastran, including all documents that discuss SAS, ANSYS’s supposed “lock-in” theory, the existence of an “Advanced Nastran” Market, switching costs or inertia against changing from Nastran-based products;
- Documents relating to ANSYS’s pricing and competitive strategies in the FEA solver market;

- Documents relating to ANSYS's consideration of potential acquisitions of competitors in the FEA solver or MCAE market, including, but not limited to MSC;
- A list that identifies the customers currently purchasing ANSYS's Solver, alone or in conjunction with other ANSYS products or services;
- Financial information showing ANSYS's current and future forecasted revenues, profits, and margins for each product; and
- Electronic data that identifies the amounts each customer paid for any ANSYS product or service during the relevant period, so as to permit MSC's experts to conduct cross-elasticity analyses.

IT IS FURTHER ORDERED that this search shall include the files of the 19 individuals identified by ANSYS, as well as the following additional employees: Bill Bryan, David Sonnet, Lynn Rowles (and her direct reports), Ravi Kumar, John Priess, Less Stobler, Andy Farrington, Rex Dixon, Scott Hanratty, Bert Murray, John Terens, Terry Hurley, Gerry Kyle, Peter Kingman, Janet Swaysland, Stephen Scampol, Stephen Meinshein, Andy Bowe, Mark Swenson, Lisa Kitts, Mike Odel, Robert Bayes, Janet Wolf, Karen Love, Chuck Norton, Cliff Bliss, Brian Tabert, Jeff Spire, Glenn Hartung, Kim Kirley, Raiza Lolia, and all marketing or sales people having any responsibility for the following customers (including their divisions and affiliates) or for the regional ANSYS Support Distributors (ASDs) that deal with such customers: Allison Engines, Altair, Boeing, Caterpillar, DaimlerChrysler, Delphi, DERA, U.S. Department of Defense, Embraer, Ford, General Motors, General Electric, Honeywell, Hubbell Power Systems, Hughes, John Deere, Lockheed, McCaulley Aircraft, NASA, U.S. Navy, Northrop Grumman, Orbital, PLM Solutions, Pratt & Whitney, Raymond Corporation, Raytheon, Robert Bosch Corp., Rolls Royce, and TRW Space and Electronics.

IT IS FURTHER ORDERED that ANSYS shall send an e-mail or other written communication to all its employees residing in the United States (with a copy to counsel for MSC and Complaint Counsel) asking such employees to forward responsive documents or respond that they have no such documents in their possession, custody, or control.

IT IS FURTHER ORDERED that ANSYS shall produce the instructions governing the computer search of such employees' hard-drives and the company's e-mail server.

Dated: This ___ day of January, 2002

D. Michael Chappell
Administrative Law Judge

CERTIFICATE OF SERVICE

This is to certify that on January 25, 2002, I caused a copy of the attached MSC's Response to ANSYS's Motion to Limit Subpoena Duces Tecum, and Proposed Order to be served upon the following persons by hand:

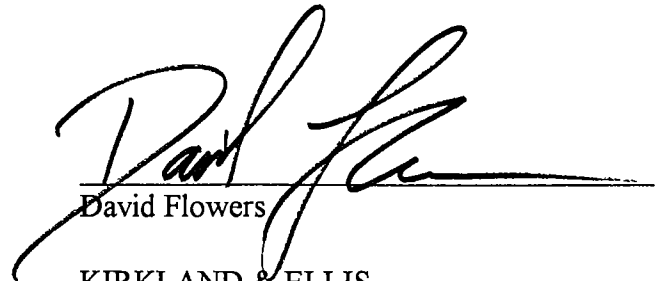
Honorable D. Michael Chappell
Administrative Law Judge
Federal Trade Commission
600 Pennsylvania Avenue, N.W.
Washington, DC 20580

Karen Mills, Esquire
Federal Trade Commission
601 Pennsylvania Avenue, N.W.
Washington, DC 20580

Richard B. Dagen, Esquire
Federal Trade Commission
601 Pennsylvania Avenue, N.W.
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Via Facsimile and Federal Express:
Thomas A. Donovan, Esquire
Joseph C. Safar, Esq.
Kirkpatrick & Lockhart, LLP
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Counsel for Respondents,
MSC.Software Corporation

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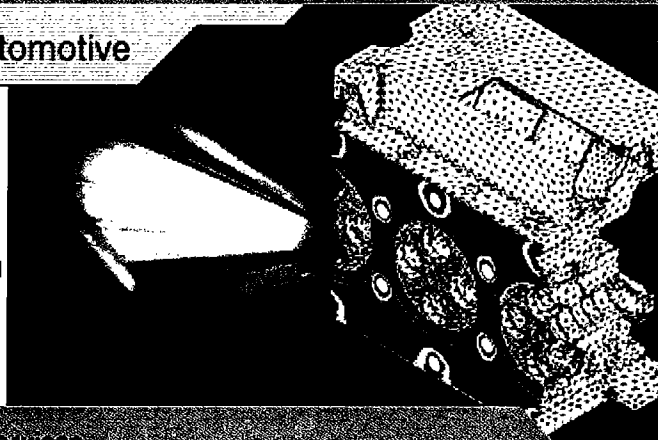
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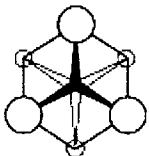
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Using FEA to Simulate a Space Mission

Pratt & Whitney engineers recently used finite-element analysis (FEA) to ensure the flight-worthiness of a critical component of the space shuttle main engine. The component, a duct in the liquid oxygen turbo pump, experiences temperature swings of 1,500 degrees F during the course of a mission. Using ANSYS FEA software from ANSYS, Inc. (Canonsburg, Pennsylvania), the engineers simulated the thermal response of the part throughout an entire mission, from pre-launch to shut down. Then, using the results of the heat transfer analysis, they simulated the structural response of the part at five different time points.

Analysis results indicated a number of locations that were highly stressed and prone to developing cracks. This information was fed back to the designer who modified the duct to help it better withstand such extreme temperature variations. All this was done in two months, a dramatic time savings compared to building and testing a prototype part.

"To build and test a part like this takes about one and a half years," says Joe Metrisin, a senior analytical engineer at Pratt & Whitney. "And it's very difficult to instrument a part like this with strain gauges to determine what the stresses are." Not only was analysis faster and more accurate, it was also less expensive. "It can cost millions of dollars to test a prototype of this duct because we have to build and test the entire turbo pump," Metrisin adds.

Thermal Shock
Pratt & Whitney, a division of United Technologies, is located in West Palm Beach, Florida. The company develops gas turbine engines for commercial and military aircraft as well as rocket engines for the NASA space program.

Recently, Pratt & Whitney has been redesigning the high-pressure turbo pumps used in the space shuttle's three main engines. Each engine has a liquid oxygen turbo pump and a liquid hydrogen turbo pump. The purpose of these pumps is to boost the pressure of the liquid fuels as they enter the engine's combustion chamber. The liquid oxygen turbo pump, for example, increases the pressure of the oxygen from 420 psi to 4,300 psi.

Turbo pumps are active only when the engines are active which is during the approximately eight minutes from launch until the shuttle enters the pre-orbital phase. During the first five seconds of that time, the temperature inside the engines goes from about -300 degrees F (the temperature of the cryogenic oxygen and hydrogen flowing through them prior to launch) to more than 1,200 degrees F.

"That's an extreme thermal shock that can cause cracks to develop in metal parts," says Metrisin. "After the engines run for several seconds, the temperature becomes stable and the stresses are fairly low during most of mission. But at shut down, you see the same level of thermal shock in reverse as the temperature goes from hot back to cold."

Until this past summer, the space shuttle was equipped with turbo pumps from another vendor. These pumps have proven to be very costly, however, because they require maintenance after every flight. Pratt & Whitney was contracted by NASA to design new turbo pumps able to operate for multiple missions without maintenance.

Mission-Critical Component
Critical to the design of the new pumps was a component called a turn-around duct. This nickel alloy part consists of 22 aerodynamic struts that support a center turning vane between two flow turning end walls. The purpose of this part is to turn the turbine exhaust flow to radially exit the liquid oxygen turbine assembly. Although there is little

At a glance

Aerospace

mechanical load on the duct, stresses develop due to the severe thermal gradient of the engine environment. This part is particularly vulnerable because it is the first to experience the hot gas as it exits the turbine.

The designer of the duct modeled it using the Pro/ENGINEER solid modeling system. Metrisin, who was responsible for the analysis of the duct, worked directly from the Pro/ENGINEER model. In fact, that was one of the reasons he chose ANSYS for this analysis. "I can use any analysis package I want," Metrisin explains. "I chose ANSYS for this project in part because it was easy to interface to Pro/ENGINEER." Metrisin created the finite-element mesh for the part using Pro/Mesh, then imported the mesh to ANSYS.

His next step was applying thermal boundary conditions to the duct surfaces. This information came from programs developed by Pratt & Whitney using computation fluid dynamics to determine gas temperatures in simulated shuttle missions. After supplying ANSYS with this data, Metrisin had the software perform a transient thermal analysis of the duct over the course of an entire space shuttle mission.

When that was complete, he converted the heat transfer model to a stress model. According to Metrisin, the ability to use the same model for heat transfer and structural analysis was another reason he wanted ANSYS for this project. Using temperatures generated from the heat transfer analysis, along with other minor mechanical loads on the duct, Metrisin used ANSYS to perform a structural analysis of the part at five time points in mission: two during start-up; two during shut-down, and the steady state portion of the flight.

Results of the structural analysis showed that the area with highest stress was at front end of the flow path, where hot gas exits the turbine. This area experienced so much stress that it would have been likely to break, causing a catastrophic failure. In addition, there were about 20 other locations that were stressed sufficiently to potentially develop cracks.

The designer used the analysis results to redesign the duct. The most highly stressed area at the front of the flow path was actually separated from the rest of the duct. Explains Metrisin, "That area responded thermally a lot faster than the rest of the duct, resulting in a thermal fight on start up. This one area would get hot while the rest of the duct was cold. Since it's a ring, it wanted to grow outward as it heats up while colder portion wanted to grow inward, putting compressive stresses on the part. The opposite is true during shutdown when the cold inner ring shrinks from the hot outer ring developing severe tensile stresses in the part. The duct was redesigned so that this one flow path ring became a separate piece. That way it could expand independently of the rest of the turn-around duct. We also changed the material of the separate flow path ring to one that could better withstand thermal shock."

After the redesign, the part was run through another similar set of ANSYS analyses. In all, they went through about five iterations to perfect the design of the duct. To verify the analysis results, a prototype of an earlier duct design was tested. "The test program confirmed our results," says Metrisin. "It cracked in every place the analysis predicted."

Pratt & Whitney's oxygen turbo pump made its first flight on the Space Shuttle Discovery in July 1995 when it was installed on one of the three main engines. It performed well and NASA recently certified the pump to fly 10 missions without being overhauled. On another mission this fall, two of the shuttle engines will have Pratt & Whitney turbo pumps.

An analysis as complex as what Metrisin did on the turn-around duct is somewhat new to Pratt & Whitney. Computing power limited the use of analysis in the past, according to Metrisin, but now that that hurdle has been overcome with the purchase of a variety of high-powered workstations and the computational efficiency of ANSYS' new PowerSolver, the company will use analysis increasingly to aid designers. "When we didn't have the resources to run models this large, we relied more on testing," says Metrisin. "Now we'll get the same information in time to refine our designs."

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Hardware Support



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ANSYS/Multiphysics combines the power of matrix- and load-vector coupling (see sidebar) to represent the "physical fields" required for accurate, reliable simulation results in applications ranging from cooling systems and power generation, to biotechnology and MEMS. The software easily simulates complex thermal/mechanical, fluid/structural and electrostatic/structural interactions, and includes the complete range of powerful ANSYS Iterative, Direct, and Eigen solvers.

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How can a comprehensive package like this possibly be improved? Add the ANSYS/LS-DYNA™ package and get explicit dynamic simulation of complex, short-duration dynamic events. On its own or with ANSYS/LS-DYNA, ANSYS/Multiphysics is the deluxe package to which product developers turn for a comprehensive simulation solution.

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Since each user has unique needs, ANSYS functionality also is offered in a variety of 'flavors,' which allows each user to select precisely the functionality wanted, and nothing more.

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- Linear
- Nonlinear
 - Geometric, Material, Element, Contact
- Static
- Dynamic
 - Transient, Natural frequency, Harmonic response, Response spectrum, Random vibration
- Buckling
- Topological optimization

Thermal

- Steady-state or transient
- Conduction
- Convection
- Radiation
- Phase change via enthalpy

CFD

- Steady-state or transient
- Incompressible or compressible

- Laminar or turbulent
- Newtonian or non-Newtonian
- Free, forced, or mixed convection heat transfer
- Conjugate solid/fluid heat transfer
- Surface-to-surface radiation heat transfer
- Multiple species transport
- Free surface boundaries
- Fan models and distributed resistances
- Stationary or rotating reference frames

Acoustics

- Fully-coupled fluid/structural
- Near- and far-field
- Harmonic, transient, and modal

Electromagnetics

- Electrostatics
- Magnetostatics
- Low-frequency electromagnetics
 - Harmonic or transient
- High-frequency electromagnetics
 - Harmonic or modal
- Current conduction
- Circuit coupling

Coupled Field

- Thermal/structural
- Fluid/structural
- Electrostatic/structural
- Magneto/structural
- Acoustics/structural
- Thermal/electric
- Thermal/electromagnetic
- Fluid/thermal
- Fluid/electromagnetic
- Piezoelectric
- Electromechanical circuit simulator

Solution Methods (Solvers)

- Iterative
 - Preconditioned conjugate gradient (PCG), Jacobi conjugate gradient (JCG), Incomplete Cholesky conjugate gradient (ICCG)
- Direct
 - Sparse matrix, Frontal (wavefront)
- Eigensolvers
 - Block Lanczos, Subspace, Reduced, QR-Damped (damped eigenvalues)
- CFD
 - Preconditioned conjugate residual (PCCR),
Preconditioned generalized minimum residual (PGMR), Preconditioned bi-conjugate gradient (PBCG), Tri-diagonal matrix algorithm (TDMA)

Graphics and Postprocessing

- Automatic plotting of convergence norms during solution
- Animation of contours, vectors, isosurfaces, slicing planes, and particle tracing
- Automatic pressure and shear stress integration
- Model query and results picking with 3-D annotation
- 3-D graphical expansion of 2-D model
- Translucency and surface texturing for clarity and realism
- Support for BMP, EPS, TIFF, JPEG, VRML, WMF, and EMF graphic formats

Platforms

- Compaq Tru64 UNIX
- Hewlett Packard HP-UX
- IBM RS/6000 AIX
- Silicon Graphics IRIX
- Sun Solaris
- Intel workstations (Windows 2000, Windows NT)

4.0, Windows Me, Windows 98, and Linux)

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- Electric & Magnetic Cartesian or spherical coordinate systems.
 - Radar Cross Section:
- Total and pq-polarization plots
 - Antenna radiation pattern:
- Rectangular and polar plots
- Directive Gain with rectangular, polar plot and directivity
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- Enhanced shape formulation for more accurate electric field calculation in bending dominated problems.
- Direct input of the piezoelectric strain matrix material property.

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Last Updated: 10 January, 2002



ANSYS Inc. and SAS LLC enter into strategic NASTRAN partnership

Agreement Includes Joint Development of New NASTRAN Solution and Exclusive OEM Distribution

Canonsburg, PA - November 27, 2001 - ANSYS®, Inc. (NASDAQ: ANSS), the global innovator of simulation software and technologies designed to optimize product development processes, today announced a strategic OEM partnership with a provider of NASTRAN simulation software and services. The global alliance is focused on the joint development of a new computer-aided engineering solution that will be distributed exclusively by ANSYS Inc.

ANSYS Inc. has been selected by SAS to be the sole distributor and support network for the new NASTRAN solution. The solution is also being developed in coordination with key aerospace and automotive companies, providing additional GUI capabilities needed.

Development of the new NASTRAN product is being driven by Dr. Richard MacNeal, founder and former chairman of MacSchwendler Corporation, and Dr. Harry Schaeffer to advance current NASTRAN capabilities.

"This joint development effort will provide companies with the next generation of NASTRAN solutions. As we work together to broaden users' options, we also will provide the most innovative NASTRAN product implementation ever produced," said Harry Schaeffer, president of SAS LLC and Dr. Richard MacNeal. "ANSYS Inc. was the perfect partner for our initiatives. Our proven dedication to providing the highest-quality solutions through highly-skilled and reliable global sales and distribution networks."

"By being data compatible, this new offering directly addresses the inertia against change within the NASTRAN user community," stated Don Brown, chairman of D H Brown & Associates. "Combining this with the unique open architecture of the AI*V platform will dramatically broaden the opportunities for users and ANSYS Inc. as a supplier."

The solution will integrate the technologies of ANSYS Inc., CADOE S.A., ICEM CFD Engineering and SAS LLC to provide the most comprehensive NASTRAN product. Building off of ANSYS Inc. architecture, NASTRAN will also be fully compatible with customer data and processes, and will provide a unique open architecture design and economic solutions for complex manufacturing processes.

"We are fortunate to have the technology and expertise of the pioneers of NASTRAN technology to make this offering a viable solution available," stated Michael J. Wheeler, vice president of marketing for ANSYS Inc. "The inclusion of this technology advances ANSYS Inc.'s support of the overall product development process. This new solution will allow companies to upgrade simulation tools and processes with minimal impact on the existing infrastructure."

The NASTRAN solution is expected to ship in early 2002. ANSYS Inc. is providing an Early Adopter Program that is now open to organizations that want to ensure long-term affordability for their NASTRAN usage. For more information, please email earlyadopter@ansys.com.

About SAS LLC

Implemented by the pioneers of NASTRAN technology, SAS LLC provides worldwide software and services that improve the ability to perform automated simulation of product and process performance.

About ANSYS Inc.

ANSYS Inc., founded in 1970 as Swanson Analysis Systems, Inc., develops and globally markets engineering simulation technologies widely used by engineers and designers across a broad spectrum of industries, including aerospace, automotive manufacturing, electronics and biomedical. Headquartered at Southpointe in Canonsburg, PA, ANSYS Inc. employs 400 people and focuses on the development of open and flexible solutions that enable users to analyze designs directly on the desktop, providing a common platform for fast, efficient and cost-conscious product development, from design concept to final-stage testing and validation. ANSYS Inc. distributes its ANSYS®, DesignSpace®, AI* Solutions™ and ICEM-CFD Engineering products through a network of channel partners in 37 countries, in addition to its own direct sales offices in 18 strategic locations throughout the world. For additional information on ANSYS Inc., please visit <http://www.ansys.com>.

CONTACT:

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FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended December 31, 1999

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number: 0-20853

ANSYS, Inc.

(Exact name of registrant as specified in its charter)

DELAWARE

04-3219960

(State or other jurisdiction of
incorporation or organization)

(I.R.S. Employer
Identification No.)

275 Technology Drive, Canonsburg, PA
(Address of principal executive offices)

15317
(Zip Code)

724-746-3304

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

None
(Title of each class)

None
(Name of exchange on which registered)

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, \$.01 par value per share
(Title of class)

Indicate by a check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by a check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in PART III of this Form 10-K, or any amendment to this Form 10-K.

The aggregate market value of the voting stock held by non-affiliates of the Registrant, based upon the closing sale price of the Common Stock on March 17, 2000 as reported on the Nasdaq National Market, was approximately \$118,452,250. Shares of Common Stock held by each officer and director and

ANSYS INC filed this 10-K405 on 03/28/2000.

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bundled products are marketed worldwide as CivilFEM for ANSYS. The Company also recently announced a partnership with Mechanical Dynamics, Inc. ("MDI"), the goal of which is to combine the structural analysis of DesignSpace with the motion analysis of MDI's Dynamic Designer Motion software into one tightly integrated modeling system.

The Company has a software license agreement with Livermore Software Corporation ("LSTC") under which LSTC has provided LS/DYNA software for explicit dynamics solutions used in applications such as crash test simulation in the automotive and other industries. Under this arrangement, LSTC assists in the integration of the LS/DYNA software with the Company's pre- and post-processing capabilities and provides updates and problem resolution in return for a share of revenue from sales of ANSYS/LS-DYNA.

In the area of MicroElectro Mechanical Systems ("MEMS"), the Company formed an alliance with MEMScAP, S.A. of Grenoble, France. The ANSYS/MEMScAP relationship provides multiphysical products to a variety of industries that are developing electrostatically driven miniature MEMS devices.

COMPETITION

The CAD, CAE and computer-aided manufacturing ("CAM") markets are intensely competitive. In the traditional CAE market, the Company's primary competitors include MSC Software Corporation and Hibbitt, Karlsson and Sorensen, Inc. The Company also faces competition from smaller vendors of specialized analysis applications in fields such as computational fluid dynamics. In addition, certain integrated CAD suppliers such as Parametric Technology Corporation, Structural Dynamics Research Corporation and Dassault Systemes provide varying levels of design analysis and optimization and verification capabilities as part of their product offerings. The entrance of new competitors would likely intensify competition in all or a portion of the overall CAD, CAE and CAM markets. Some of the Company's current and possible future competitors have greater financial, technical, marketing and other resources than the Company, and some have well-established relationships with current and potential customers of the Company. It is also possible that alliances among competitors may emerge and rapidly acquire significant market share or that competition will increase as a result of software industry consolidation. Increased competition may result in price reductions, reduced profitability and loss of market share, any of which would materially adversely affect the Company's business, financial condition and results of operations.

The Company believes that the principal competitive factors affecting its market include ease of use; flexibility; quality; ease of integration into CAD systems; file compatibility across computer platforms; range of supported computer platforms; performance; price and cost of ownership; customer service and support; company reputation and financial viability; and effectiveness of sales and marketing efforts. Although the Company believes that it currently competes effectively with respect to such factors, there can be no assurance that the Company will be able to maintain its competitive position against current and potential competitors. There also can be no assurance that CAD software companies will not develop their own analysis software, acquire analysis software from companies other than the Company or otherwise discontinue their relationships with the Company. If any of these events occur, the Company's business, financial condition and results of operations could be materially adversely affected.

PROPRIETARY RIGHTS AND LICENSES

The Company regards its software as proprietary and relies on a combination of trade secret, copyright and trademark laws, license agreements, nondisclosure and other contractual provisions, and technical measures to protect its proprietary rights in its products. The Company distributes its ANSYS software under software license agreements that grant customers nonexclusive licenses for the use of the Company's products, which are typically nontransferable. Although the Company distributes its products primarily through the ASDs, license agreements for the Company's products are directly between the Company and end users. Use of the licensed software is restricted to designated computers at specified sites, unless the customer obtains a site license for its use of the software. Software and hardware security measures are also employed to prevent unauthorized use of the Company's software; and the licensed software is subject to terms and conditions prohibiting unauthorized reproduction of the software. Customers may either purchase a paid-up perpetual license of the technology with the right to annually purchase ongoing maintenance, technical support and updates, or may lease the product on an annual basis for a fee which includes the license, maintenance, technical support and upgrades.

For certain software products such as DesignSpace and ANSYS/ED, the Company primarily relies on "click-wrapped" licenses. The enforceability of these types of agreements under the laws of certain jurisdictions is uncertain.

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