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The Honorable Chairman
FTC
Office of the Secretary,
600 Pennsylvania Avenue, N.W.
Washington, D.C. 20580

Re: In the matter of MSC.Software Corporation, Docket. No. 9299, **Agreement Containing Consent Order.**

Dear Chairman:

Joe Simons, Director of the FTC's Bureau of Competition, states,

"Because MSC eliminated its only advanced Nastran competitors, the Commission has required MSC to replicate and license its key assets to restore competition."

This proposed action assumes that no other software is available in the marketplace that solves the types of problems addressed by NASTRAN (an implicit code). Nothing could be further from the truth. Currently, the marketplace where MSC.Software competes is evenly split between three highly advanced implicit codes: MSC/NASTRAN from MSC.Software, ANSYS, from ANSYS Inc., and ABAQUS/STANDARD from Hibbitt, Karlsson, & Sorensen, Inc. (HKS). Granted, that with the purchase of Universal Analytics Inc. (UAI) and Computerized Structural Analysis & Research Corporation (CSAR), MSC.Software effectively has a monopoly on advanced versions of NASTRAN. However, the FTC has conveniently overlooked that ANSYS Inc. has a monopoly on ANSYS, and that HKS Inc. has a monopoly on ABAQUS.

In engineering today, the majority of automotive crash simulations are run on distributed memory supercomputers, which includes PC clusters running LINUX and WINDOWS. This new type of supercomputer has nearly replaced the shared memory parallel vector supercomputers of the last three decades. LS-DYNA, is the dominant code in the transient (explicit) analysis market, which includes automotive crash analysis, bird strike on jet engines, and manufacturing processes such as sheet metal stamping. LS-DYNA is also one of the few scalable advanced structural engineering codes that runs on the newer supercomputers. In fact, LS-DYNA is, without doubt, the largest user of CPU resources of the supercomputers in Detroit today. LS-DYNA is developed and marketed by my company, Livermore Software Technology Corporation (LSTC) located in Livermore, California.

Like the explicit transient codes, the future of simulations on implicit codes is also on distributed memory supercomputers. Porting a massive production code like NASTRAN,

ANSYS, or ABAQUS to this newer architecture is more difficult than porting an explicit code like LS-DYNA. Scaling to a large number of processors is very difficult to achieve. I will discuss this later.

In 1999, when asked what I thought about MSC.Software's acquisition of UAI and CSAR, I answered that they just obtained the equivalent of a monopoly on the Model T. Then, and now, even with their "NASTRAN monopoly" I have a difficult time believing that MSC will have an easy time surviving in the marketplace. With the divestiture of their key NASTRAN asset, two or three companies will now compete with a dying product in the same market as MSC/NASTRAN. Neither MSC.Software nor the new NASTRAN competitors, will have the resources to compete with ANSYS Inc., HKS, or LSTC, especially if the prices of NASTRAN are reduced, due to the cost of porting to the new generation of supercomputers. This is very good news for LSTC and for our competitors. With the strongest player out of the game, we now need to only worry about each other.

Another difficulty faced by MSC.Software is that the basic methodology used by NASTRAN is published in the open literature by hundreds of authors over the past 35 years and there are no patents related to this publicly disclosed information. Consequently, MSC.Software cannot derive a monopoly based on software patents. The developers working at LSTC as well as ANSYS Inc. and HKS most certainly are able to replicate any capability in MSC/NASTRAN if MSC.Software's customers requested it, assuming that it has not already been added.

MSC.Software, even with UAI and CSAR in the marketplace, was the company that posed the biggest concern for LSTC. MSC.Software seems to have made significant progress in moving NASTRAN to massively parallel computers. Currently, no full-featured implicit code is capable of scaling well on this new generation of supercomputers. On the other hand, LS-DYNA, which does not suffer from the complication of needing to solve millions of *coupled* simultaneous equations (LS-DYNA solves millions of *uncoupled* equations), has scaled linearly on full frontal crash models to 64 processors, i.e., a solution on 1 processor takes 64 times longer than on 64 processors. LSTC decided a decade ago to begin porting to the massively parallel supercomputers. We realized then that if we failed and our competitors succeeded, we would not survive. This has been borne out in the marketplace today. Still, after one decade, we have not completely finished the porting work.

The porting of multi-million line software codes like NASTRAN to distributed memory supercomputers is a huge undertaking. We are aware of no simple way to rewrite the software for such machines while keeping the same source code compatible with PC's. Even with nearly unlimited resources, this is not a trivial undertaking. The U.S. Government's own ASCI initiative to port the DOE's nuclear weapon design codes to distributed memory supercomputers has so far cost billions and money is still being spent to complete the work. And yet most of these codes do not approach NASTRAN in complexity. NASTRAN generates approximately sixty-five million dollars in revenue per year for MSC.Software. With the high cost of porting and that level of NASTRAN revenue, MSC.Software will be stretched (even with high license fees) to complete the porting of NASTRAN to supercomputers.

The proposed action by the FTC will severely weaken the one US company who has made the most progress in this transition. So the situation in MSC.Software's marketplace is this: if either ANSYS or ABAQUS scales linearly with the number of processors, the high-end market will move away from NASTRAN like codes. As an engineer with considerable experience and knowledge, I am certain that I could move a structural analysis from NASTRAN to ABAQUS or ANSYS, especially if the developers of these competing codes provided support by adding necessary features. If the price of software is high enough, the addition of these features will not pose a problem since the technology is well known. I suspect that I could directly move the analysis to ABAQUS or ANSYS with the codes as they exist today, if I would change some simple modeling details in the NASTRAN input. The ultimate result is that the actions proposed by the FTC will reduce competition that exists in the marketplace today since MSC will have difficulty maintaining the high prices required to generate the revenues that are required to further the development of a scalable NASTRAN. Currently, NASTRAN pricing is effectively limited by prices charged by ANSYS Inc. and HKS, which may be too low to fund the maintenance and the necessary developments required to ensure NASTRAN's future as a high-end product.

Due to the lack of scalable implicit software, LSTC started the work to develop a NASTRAN replacement seven years ago. When MSC purchased UAI and CSAR, we accelerated the effort since we knew the increase in price of NASTRAN would result in more interest by customers in our efforts and a greater payoff for us later. Currently, LS-DYNA can match NASTRAN results for normal modes, static loading, and buckling problems, which makes up a significant portion of the types of problems solved by NASTRAN. Our first goal is to eliminate the need for NASTRAN-generated results that are now read into LS-DYNA before the transient calculations begin. The second goal is to replace licenses of MSC/NASTRAN at our customer sites. However, for the second goal to be realized, we must scale better than MSC/NASTRAN and therefore complete the calculations faster. To achieve these goals we have developed equation solvers that run on supercomputers. After numerous setbacks, we believe we should be testing a scalable solver to compete with MSC/NASTRAN soon. Even without FTC proposed actions, MSC.Software will face stiff competition.

In summary, the codes ANSYS, ABAQUS, and MSC/NASTRAN compete effectively and dominate the implicit marketplace. Many other smaller players exist but probably do not have the resources to compete at the high-end. It is our belief that this equilibrium will disappear if one of the three major players, or even a smaller player, succeeds in porting their complete source code to effectively scale on supercomputers. Technically, this is possible though difficult. The company that succeeds will become the dominate player at the high-end whether or not the FTC approves. The proposed settlement will favor ANSYS, HKS, and possibly LSTC if our current efforts pay-off. Ultimately, a dying NASTRAN will finally expire.

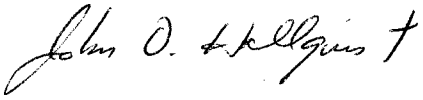
We recommend that the FTC reconsiders the proposed remedy. We believe the proposed remedy is based on a highly misinformed view of the marketplace for implicit codes, will destroy competition, and ultimately hurt the very NASTRAN users that the FTC seeks to protect. LSTC would prefer three strong competitors over two even stronger competitors, which would likely be the ultimate outcome.

A question remains: why would MSC.Software agree to such a draconian settlement? Not only must they divest of NASTRAN, but the acquirer can cherry pick their software developers. Obviously, continued litigation with no end in sight would keep MSC.Software from profitability. Secondly, the revenue generated by NASTRAN is approximately 25% of the total revenue of MSC.Software. Perhaps there are more profitable ways to spend available resources than ensuring the future of NASTRAN. For the development of NASTRAN to continue on the new generations of supercomputers requires an intact development team and the commitment of vast resources. The team will not exist at either MSC.Software or the spin-off companies. It takes many years to assemble a new team. Additionally, the lower prices generated by multiple NASTRAN competitors will not support such critical developments.

In closing, the FTC proposal appears beyond stupid. Due to the lack of technically accurate information and the misinterpretation of the marketplace for implicit codes the FTC has screwed-up. Big Time.

We are looking forward to your response.

Sincerely yours,



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August 19, 2002

The Wall Street Journal
Attn: Paul Steiger, Managing Editor
4300 Route 1 North
South Brunswick, NJ 08852

Dear Mr. Steiger;

We would like to bring the Journal's attention the recently proposed settlement between the FTC and MSC.Software (Docket No. 9299).

Enclosed are the following documents:

a. Consent Order.
b. FTC's "Analysis" of the Consent Order.
c. LSTC's Public Comment. Comment period expires September 13, 2002.

The fact that MSC agreed to this one-sided solution is of itself, most extraordinary and disturbing. The impact that the multi-million dollar legal fees were having to their profitability was most probably a factor. MSC was aptly represented by the Washington law firm, Kirkland and Elllis.

LSTC's concern is primarily centered over the shadow that this settlement will cast over the entire software industry, especially the smaller firms with single-digit market shares. Not only is MSC required to sell their source code (i.e. "crown jewels") to one or two acquiring companies but they must also allow those companies to cherry-pick MSC's staff and hire away their software developers.

LSTC is further concerned with the FTC's apparent lack of knowledge of the marketplace that they are attempting to regulate. It is clear from reading the order that they neither understand the engineering software market nor the favorable impact that their solution will have on MSC's competitors, including LSTC.

Thus far, we have seen no articles in the Journal reporting this matter. Even though in dollar-terms it is of small value, it may have a much larger impact on the software industry as a whole. As a result, we suggest that you review the details of this case, including what we believe to be the FTC's overreaching actions. Additional information is available at http://www.ftc.gov/opa/2002/08/mscsoftware.htm.

Sincerely yours,

John O. Hallquist

John O. Hallquist
President

cc: Chairman Timothy J. Muris, Federal Trade Commission
Kent E. Cox, Esq., Federal Trade Commission
Gregg F. LoCascio, Esq., Kirkland & Ellis