August 28, 2002

RE: FTC Matter No. D. 9299

Federal Trade Commission
Office of the Secretary
600 Pennsylvania Avenue, N. W.
Washington, D.C. 20580

In the software industry, major advances in technology are almost always made by small entrepreneurial companies such as Vanderplaats Research & Development, Inc. (VR&D). The principal difficulty we have is not in producing better software but persuading companies to change to something new and better when they are comfortable doing what they have always done. In the case of finite element analysis (FEA), the technology has been well established for years and so the challenges are in relative improvements in elements, eigensolvers, ease of use and newer technologies such as design optimization. Any FEA expert with a modicum of theoretical knowledge can attest to the fact that MSC.Nastran is not the most advanced FEA code available; it is simply the longest established.

For several years, small high tech companies including Vanderplaats Research & Development, Inc. have been developing advanced linear finite element analysis software. Our own software, GENESIS, and our new release, VR/Nastran, are data compatible with MSC.Nastran, but use more advanced technology than the 30+ year old MSC.Nastran software. For example, our quadrilateral element is a full six degree of freedom element that is demonstrably better than the MSC.Nastran QUAD4 element. Also, our SMS eigenvalue solver is several times faster for large problems than the Lanczos solver in MSC.Nastran (which we also have). VR/Nastran is a FEA solver alone while GENESIS includes state of the art optimization capabilities. It is argued that DMAP is an essential feature of MSC.Nastran. However, few engineers today write DMAP and, when our clients require something done by DMAP, we simply code it onto our software in a matter of days. Furthermore, with our software, the users can link their own additional routines for added functionality.

Today, our VR/Nastran and GENESIS programs perform over 90% of the analysis tasks performed by MSC.Nastran. This covers over 99% of the daily analysis tasks performed by industries that use FEA software. A company that currently has a corporate license for MSC.Nastran could immediately convert to VR/Nastran and then buy just one or two seats of MSC.Nastran to perform the less common analysis tasks that we do not yet support. The same can be said for using GENESIS for analysis only, since it contains the same capabilities as VR/Nastran.

Now consider what effect the FTC ruling will have on companies such as ours. Whoever licenses the MSC.Nastran program will have no up-front development costs except a fee to get the software. They can simply market this software at a highly discounted price and reap the profits, unless MSC.Software undercuts them on price. It could be reasonably assumed that MSC would do so to stop customers from switching. In the end, there will definitely be a price war. The pricing war has the potential to stop any further development and enhancement to MSC.Nastran. Customers may win in the short term in through lower prices but in the long run they will loose in terms of technology. This ruling will have another important adverse impact on smaller technology companies such as VR&D. These companies have spent years and millions of dollars to create newer and better technology. The price war will not only limit future innovation/development but also create an additional barrier to entry into this market.

In summary, this will create two or three MSC.Nastran suppliers, competing almost exclusively on price. Since MSC.Nastran is about 20% of MSC.Software's revenue, they can win the price war by taking a loss in this area for a period of time and retaining their clients by virtue of being in place already. None of these companies will have the MSC.Nastran based revenue to further develop the software. Meanwhile, the rest of us who compete on a technology level and continually expand the technology, but cannot afford to operate at such a loss, will be at an extreme disadvantage in entering the market. In short, by this ruling, the FTC will stifle the very competition it purports to promote!

This suit was ridiculous from the start, as I told the FTC in 1999 when you first considered this folly. The government's assertion that only a Nastran with its origins in the NASA Nastran is proper FEA is ridiculous. Further, the government did not complain when MSC.Nastran had 90% of that market (most of us would say that's a lock on the market). When MSC.Software acquired CSAR and UAI, companies who NEVER considered buying these other codes complained. However, these companies NEVER supported CSAR or UAI, using them and abusing them only to keep the MSC.Nastran price down, with the side effect of limiting development which, after all, costs money. As a result CSAR and UAI had no other option but to sell themselves to MSC and cash in for whatever they could. What got us here is that one arm of the government makes companies buy MSC.Nastran to validate designs, to the exclusion of arguably better software, while now another arm of the government says the company they promoted may make too much money. If there is a monopoly, it's the government itself that created it.

It seems that the government wants to protect consumers who themselves don't even look for alternatives. Who do small technology leaders who are trying to gain a foothold in the industry go to for help?

Under the guise of promoting competition, you've done little more than perpetuate a uniform level of mediocrity! But at least it will be cheap.

Yours truly,

Garret N. Vanderplaats

Garret N. Vanderplaats, Ph.D., PE
President