MECHANICAL/STRUCTURAL DESIGN WITH A MACINTOSH

By

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INTRODUCTION

The Macintosh computer has long been a favorite of engineers
and designers because of its easy interface and because of the
standardization between applications. The Macintosh II now pro-
vides color and power for the Macintosh to move into greater
applications and to capture a larger share of the market.

AN EXAMPLE SUITE OF SOFTWARE

Four Macintosh based software packages provide a particularly
useful combination to the Macintosh user: Dimensions, MSC/pal,
VersaCAD/Macintosh and MGM Station.

Dimensions is a high quality 3D package that includes both
wireframe modeling and solid modeling. It's useful for creating
the 3D geometry and for visualizing the model. Output from
Dimensions can be sent to either Versacad for drafting or to
MSC/pal for analysis.

MSC/pal for the Macintosh has recently been re-released with
a much greater adherence to the Macintosh interface standard.
It's now even easier to use with all the ease-of-use that the
Macintosh has to offer. And it still has all of the analysis
power expected of MSC/pal.

VersaCAD/Macintosh Edition contains all of the features
expected of a comprehensive CAD package. Over 300 professional
functions including geometric construction, multi-line draw, five
snap methods and the like.

When you look at MSC/pal, Dimensions and VersaCAD, you will
be struck by the similarity of interface. It's as if they are

three modules from the same company. They are a matched set for the Macintosh based Mechanical or Structural engineer or designer.

When the design and production drafting was complete, the part geometry was sent directly from VersaCAD to MGM Station where the NC file was created and edited.

Apple had all four products in their booth at Autofact '87. They simulated a factory: Order entered. Three-D model built in Dimensions. Analysis done in MSC/pal, production drafting done with VersaCAD and NC file prepared by MGM station.

BENEFITS OF MACINTOSH

These software products, and the Macintosh provide the small man-ufacturer with a resource never before available:

o   Each module of software developed by an expert in the field.

o   Standardized interfaces as if the software had been writ-ten by one company.

o   A graphic interface most suitable for engineers and designers who use graphics.

CAD companies previously would hire several engineers and programmers and set about trying to develop an integrated pack-age. The problem was, it is very difficult for one company to hire all the top people in all the disciplines. Consequently, some part of the package would be strong and some would be weak. Then personal computers came along and started a whole new approach to software development. Anyone with a good idea can start a software company. The strong win and the weaker ones fade away. The result of this competitive, evolutionary process

is excellent software available at low cost.

This method of development first started on DOS computers. There was no standardization between packages so the user interface used for a CAD package might be entirely different than the CAM or CAE package. The Macintosh standard Interface changes all of this. The engineer user that knows VersaCAD will find it easy to learn Dimensions or MSC/pal and vice versa. In fact, the literature cites surveys indicating that the average DOS user knows two software products. The average VersaCAD/Macintosh user knows six software products.

The Macintosh graphics interface is most appealing to engineers and designers since engineers typically think graphically, there are some restrictions in what can be done by the programmer, but giving up the little bit of freedom is vastly exceeded by the benefits derived

The Macintosh II is a powerful computer with 68020 CPU and 68881 coprocessor support. Screen resolution is 640 x 480.

CONCLUSION

Whether the application involves mechanical or structural analysis, 3D modeling or professional design drafting the Macintosh is now a capable option and should be considered before making a selection. If ease-of-use is an important criteria for selections, the Macintosh will be a strong contender.