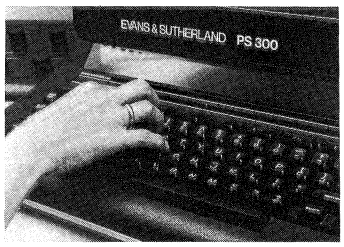
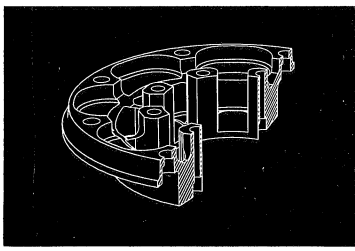
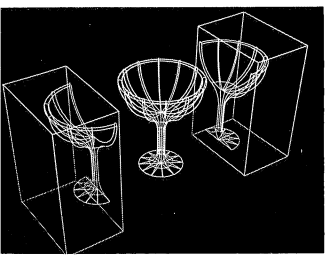
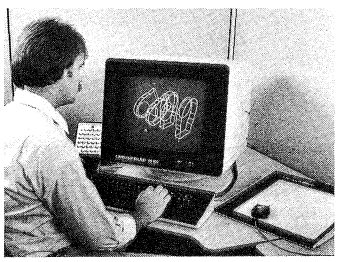
PS 300 / ROMULUS:

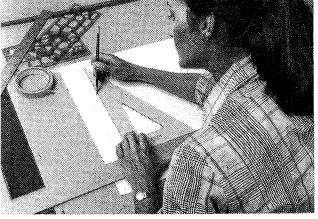
EVANS & SUTHERLAND











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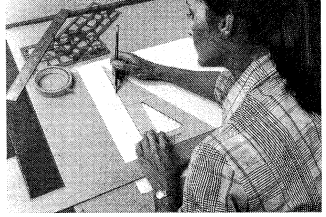

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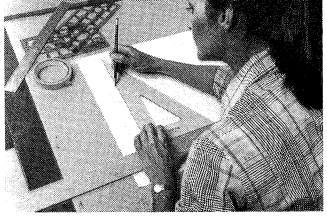

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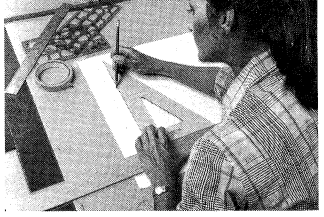

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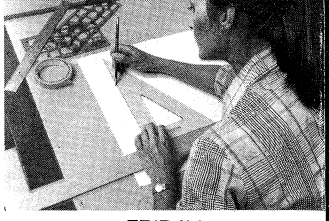

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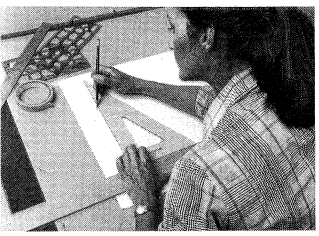

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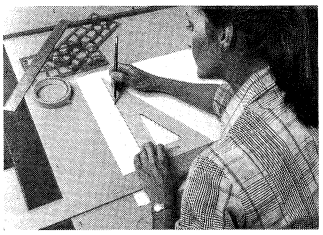

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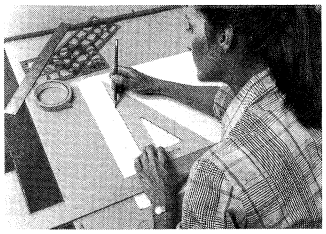
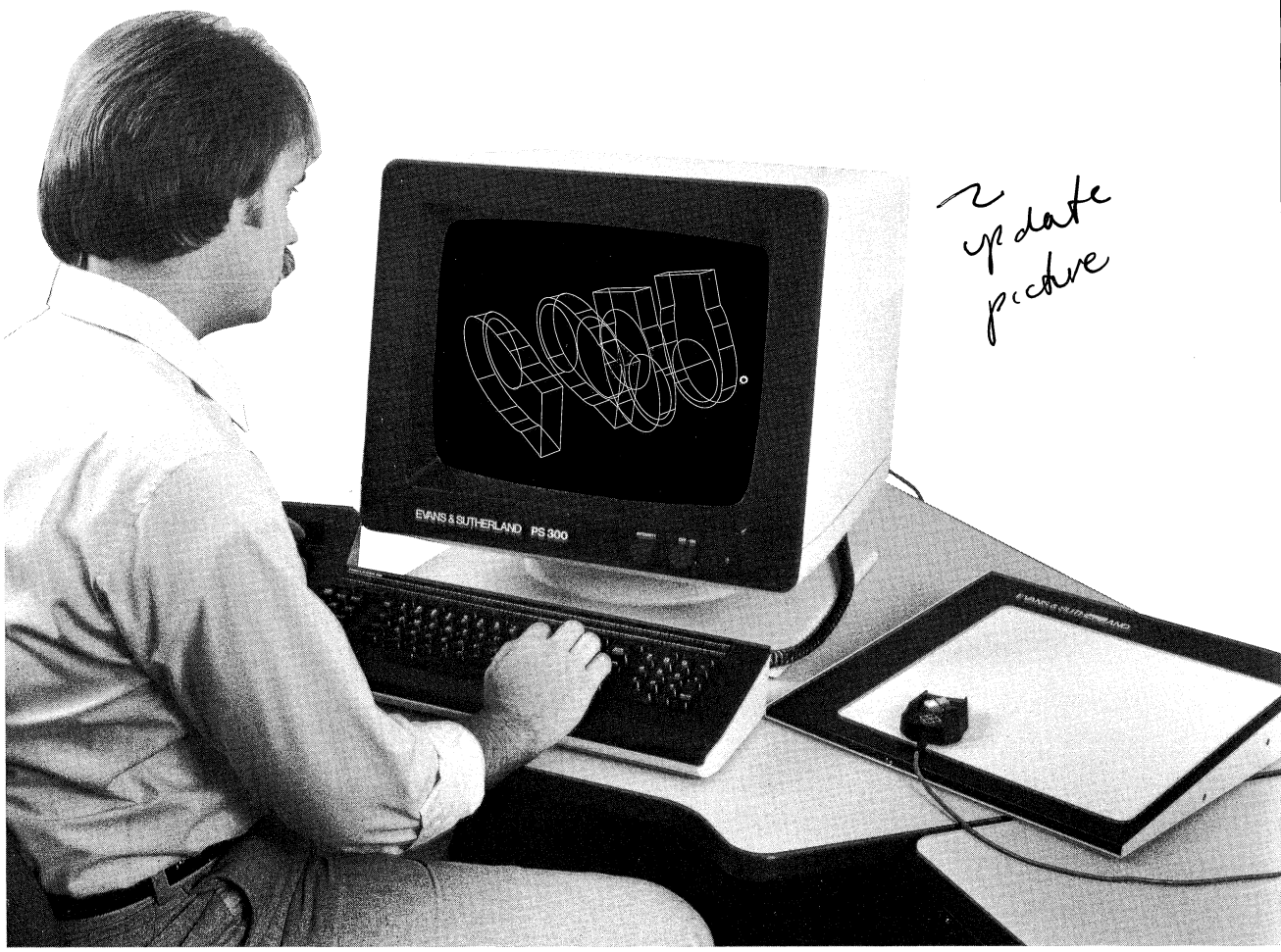


WEDNESDAY

Until now, *engineering design was done laboriously on a drawing board. At least three separate elevations were required to represent X, Y, and Z axes. A rendering was required to visualize perspective, and a model painstakingly constructed by hand. Then, if something did not prove out, it meant starting all over again.*



But today, *an engineer can create a design, analyze it, modify it, model it in three dimensions, examine it from any angle, test and retest it quickly, accurately and cost-effectively with the Evans & Sutherland PS 300 computer graphics system and ROMULUS solid geometric modeling software package.*

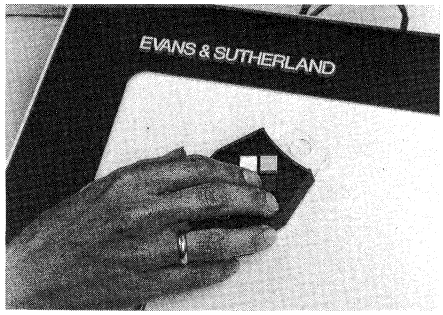
Interactive Three-Dimensional Solid Modeling Tool

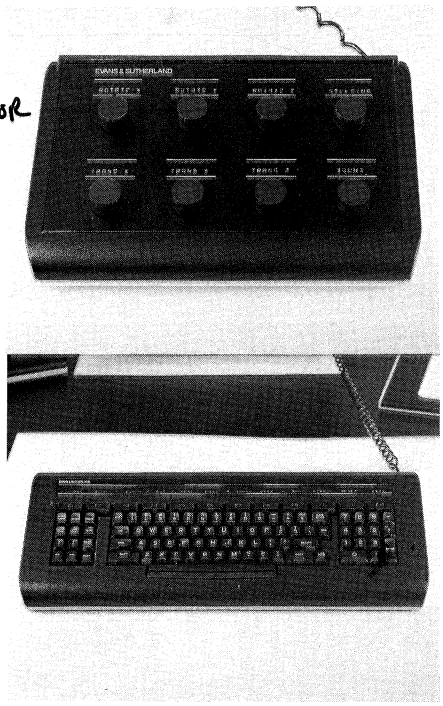
HARDWARE is the Evans & Sutherland PS 300 computer graphics system, which includes:

- **PS 300 with one megabyte of memory**
- **9600 Baud, RS232 Interface**
- **Graphics Control Processor**
- **Display Processor**
- **19" (48cm) Monochromatic Display**
- **Alphanumeric Keyboard with 12 Function Keys and 8 Character LED Displays**
- **Control Dials with 8 Character LED Displays**
- **Data Tablet with Cursor**
- **User and Operator Documentation**
- **Installation and 60-Day Warranty**

SOFTWARE is the ROMULUS Solid Geometric Modeler from Shape Data, Ltd., of Cambridge, England, a wholly owned subsidiary of Evans & Sutherland. The software includes:

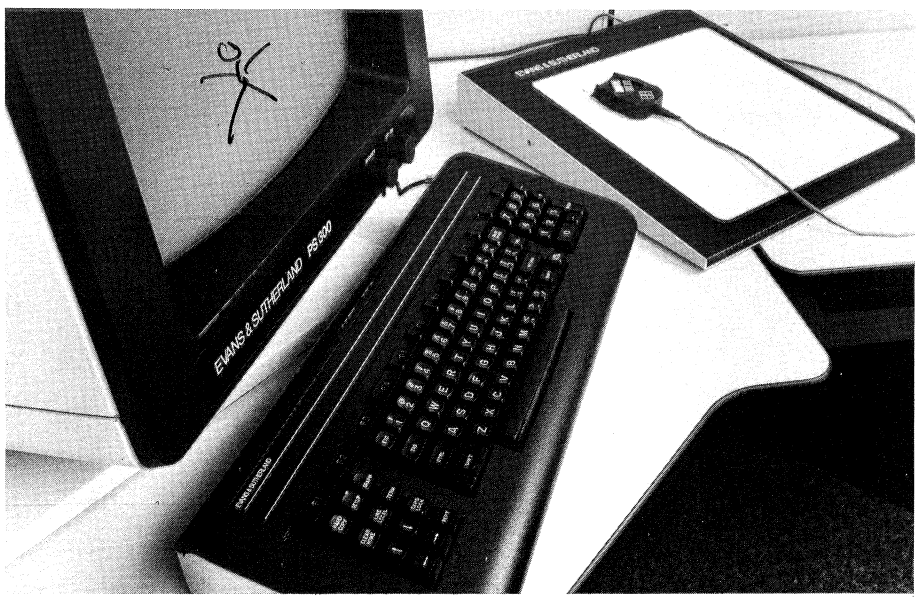
- **ROMULUS Binaries**
- **Complete User Documentation, Including Tutorial Guide**
- **60-Day Warranty**





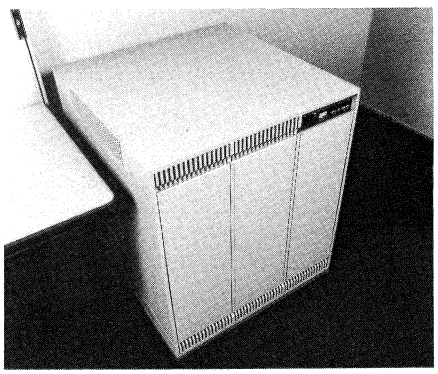
THE PS 300/ROMULUS package provides the ability to build complete three-dimensional solid models. Capabilities of the PS 300/ROMULUS package include:

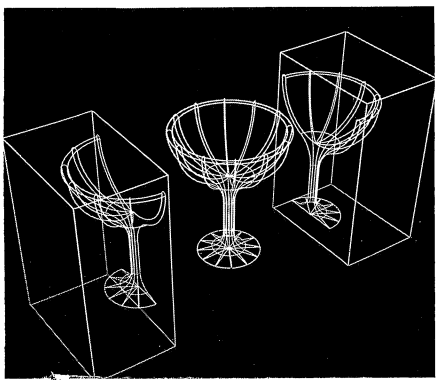
- Creating solid models of objects with surfaces including planes, cylinders, cones, spheres and toruses.
- A comprehensive command language for easy user interaction to build, manipulate, interrogate and visually examine objects. Multiple levels of command prompting aid in user training and allow continued ease of use.
- Automatic recording of interactive user sessions in a monitor file of commands.
- Ability to execute previously created command files.
- A variety of construction methods including 3-D edge based, linear and rotational sweeping, Boolean operations, blending and chamfering, planar and cylindrical sectioning.
- Construction geometry facility.
- Full hidden line removal.
- Gray scale renderings.
- Hatching of faces.
- Local viewing capabilities including:
  1. Dynamic 3-D rotation, translation and zoom, hither and yon



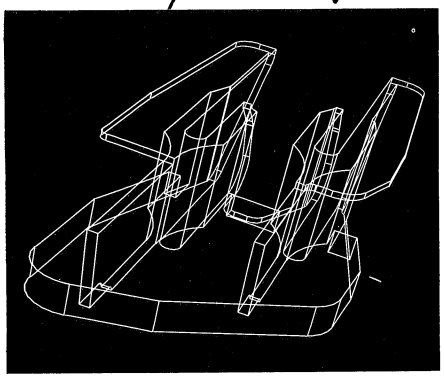
clipping, and plane manipulation.
2. Alternate between one dynamic view and four simultaneous views, including three static orthogonal and one dynamic.
3. Perspective and orthographic views.
4. Depth cueing.
5. Clipping.
6. On and Off controls of display annotations such as face labels, edge labels, hatching, construction geometry, etc.
7. Reset to arbitrary user settable view.

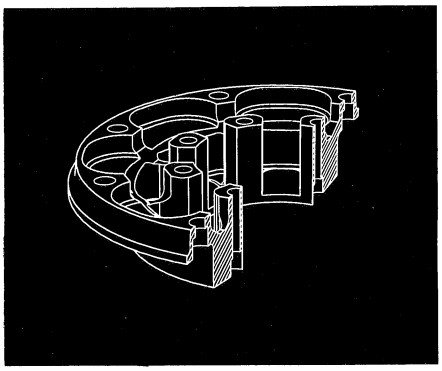
- Dynamic menuing to build commands and perform local viewing operations using the data tablet.
- Keyboard input and textual output via the PS 300 terminal emulator or separate alphanumeric terminal.
- Visual and analytical interference checking.
- Mass properties calculations including surface area, volume, center of gravity, principal axis and moments of inertia about any axis.
- Ability to produce textual transmission format object descriptions.
- Ability to save as a file and retrieve the evaluated model without re-executing the building commands.
- Limited interactive dimensioning.

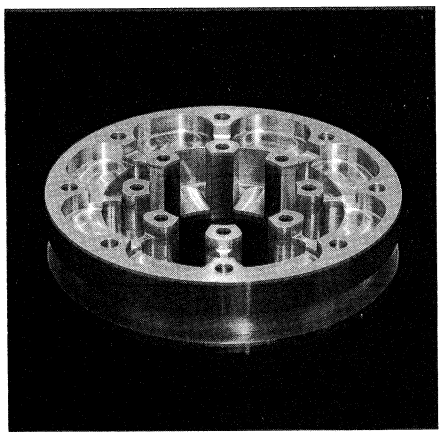




new graphics



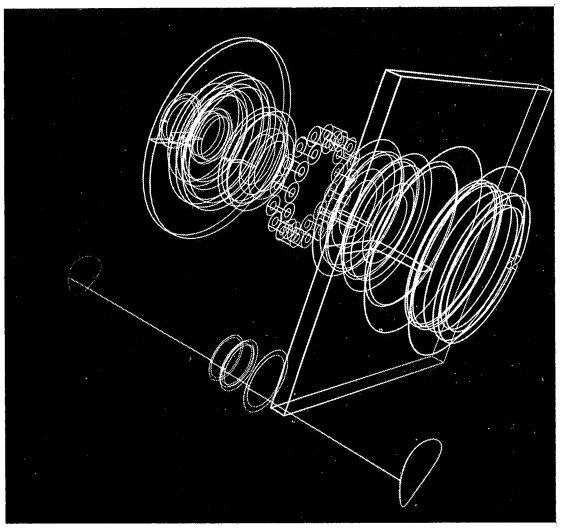




The Right Answer At The Right Time

THE need for new designs, the high cost of labor and the necessity of reworking designs are a few of the reasons why industries are seeking alternatives to the paper and pencil method of design. There is a better way.

The PS 300/ROMULUS package is a solution in itself. It is the answer for a designer to effectively, and efficiently, solve design problems. The PS 300/ROMULUS package: The workable, affordable designing tool with more features, more functions and more benefits. It is another innovative product from Evans & Sutherland, providing you with the leading edge in computer graphics solutions.



A workable, affordable package

Since 1968 Evans & Sutherland Computer Corporation has provided computer graphics systems for creating and viewing three-dimensional structures. Software, however, or the task of creating the data to describe the object being displayed, has always been left to the user. Evans & Sutherland now offers a new approach to modeling: The PS 300/ROMULUS package, a combination of advanced hardware and software technologies, which allows the user to create solid three-dimensional models and manipulate them for visual understanding.

The PS 300/ROMULUS package replaces the laborious task of sketching with paper and pencil to investigate and convey conceptual design ideas, and reduces the need to build mock-ups and physical models. It allows for easy modification of designs, rather than completely re-creating them.

Anyone who designs and packages products can take advantage of this new capability. The PS 300/ROMULUS package fits very nicely into conceptual designing tasks in the furniture, automobile, aerospace and container industries, as well as providing component placement assembly and layout in almost any manufacturing situation. The package expedites mechanical engineering and architectural design work, as well as set design for the motion picture and television industries. There are new applications for the package in the world of animation, 3-D visualization of corporate logos and other aesthetic considerations requiring a three-dimensional creative and analytical environment.

The PS 300/ROMULUS package offers both a proven high performance computer graphics system and a comprehensive solid geometric modeling software package. It may be used on an appropriately configured VAX computer using the VMS operating system. Truly, the PS 300/ROMULUS package is a workable, affordable solution.

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