



A leading market research and consulting firm founded in 1989, TechniCom, Inc., focuses on the forces and dynamics surrounding the mechanical engineering design and manufacturing marketplace. Its principals are recognized authorities who have a solid, fundamental understanding of the marketplace, the leading products, and the vendors producing these products.

PRICING AND OFFERING CONDITIONS OF LEADING MECHANICAL CAD/CAM VENDORS - 9TH EDITION

A description of our report, detailing the results of eleven leading mechanical CAD/CAM vendors providing software bids

TechniCom's most recent report, *Pricing and Offering Conditions of Principal Participants in the Mechanical CAD/CAM Industry*, highlights many of the dramatic changes taking place in the industry. The continuing downward pricing pressure of software heads the list. Distinct price differences exist among the vendors, generally, but not always related to the extent of the product functionality.

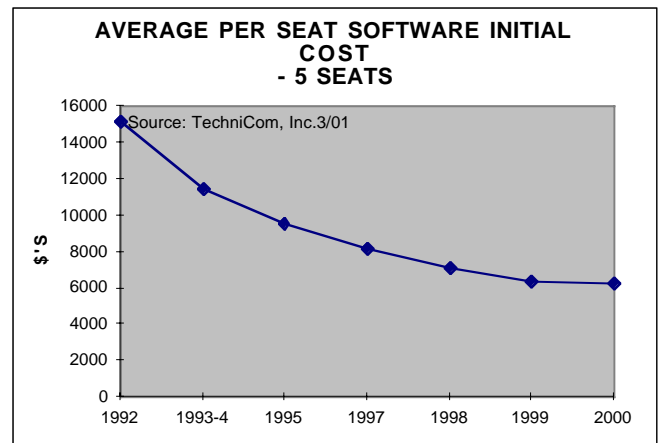
This report contains data on mid range systems as well as "large scale integrated systems." It's no surprise that more capable packages charge more! But, some charge a lot more, while others charge only a little more.

To gather the data, leading mechanical CAD/CAM vendors submitted bids for two hypothetical CAD/CAM systems, one with 5 seats, the other with 11 seats. The thirteen chapter, 173 page report explores the software pricing, offering conditions, module pricing, and platforms for the various vendors. Vendors will find a wealth of competitive information; users anticipating buying such systems can improve their buying process.

Downward software pricing trends continue

Since 1992 we have seen a decrease in the per seat software prices of 45%, from \$14,300 in 1992 to under \$6,500 this year. In the past, decreases have come from repackaging, but a portion has also come from a reduction in the average pricing. This reduction in price took a large jump in 1997 because of the introduction of mid range software products such as SolidWorks and Solid Edge and the upward migration of software to higher function such as those from Bentley Systems and Autodesk. Last year the curve

continued to decline with a slightly lower slope as shown in the chart below. High end systems (we like the term large scale integrated systems better), for the most part, are maintaining their



price differential based on their additional, fully integrated offerings from a single vendor. Last year Catia entered the mid range priced fray with its new P1 offering. Along with this both SDRC and PTC have restructured their pricing to accommodate lower entry prices. This year the curve seems to be bottoming out, showing only a 2.3% decrease to \$6280.

Software Lifecycle Pricing closes the gap

Lifecycle pricing takes into account a five year life cycle and includes the initial software purchase, the warranty period and the

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maintenance costs for the five year period, less the length of the warranty. At the high end of the 11 seat scale is CATIA at \$320K, closely followed by Pro/ENGINEER, at about \$302K. At the low end are Solid Edge and SolidWorks at \$101K, followed by CADKEY at \$115K and by SolidWorks at \$122K.. For an 11 seat configuration Pro/ENGINEER costs almost three times the price of SolidWorks.(\$301K vs 122K). This gap widened during the last year because Pro/E now has a maintenance price of 20% versus the previous 13% of the initial software price.

For the 5 seat configuration the price variation between the highest (Unigraphics) and lowest (Solid Edge) is \$12800 per seat. For the 11 seat system the price variation from the highest (Catia) to the lowest (Solid Edge) is almost \$20,000 per seat - a considerable difference! *Certainly these systems have different capabilities. Users will have to be the ones evaluating whether the functional differences account for the difference in pricing.*

What can users expect to initially pay for 3D MCAD systems?

The think3 pricing makes these initial comparisons more difficult, thus making the lifecycle comparisons above more

realistic for reasonable comparisons. Lifecycle prices include five years of maintenance costs plus the initial software costs.

Note that users can initially spend from \$8,500 to \$58,000 for the 5 seat system and from \$30,000 to \$182,000 for an 11 seat associative solids system, a difference of almost six times. think3's subscription pricing greatly changes the entry price. Without think3, the prices start from \$17,000 and \$52,000 respectively. Do all of these systems offer the same capabilities? No! The purpose of this analysis is not illustrate the differences between the software, but rather the pricing if users buy these particular packages. Users need to carefully analyze their needs and the system that will best fit them.

The vendors and their products in the report include:

| Vendor | Product |
|-----------------------------|---------------|
| Autodesk | Inventor |
| CADKEY | CADKEY |
| CoCreate | SolidDesigner |
| IBM/Dassault Systemes | CATIA |
| Parametric Technology Corp. | Pro/ENGINEER |
| SDRC | I-DEAS |
| SolidWorks | SolidWorks |
| think3 | thinkdesign |
| UGS | Solid Edge |
| UGS | Unigraphics |
| VX Corp. | VX |

Software costs by function

This chart and the one below depict the vendor charges by function. Readers should be careful because the totals may be somewhat misleading since we only include one of each seat, therefore the totals are not additive.

Immediately outstanding are the low prices for drafting/detailing offered by most vendors, with the bulk falling near or below \$5000, once the exclusive domain of Autodesk. Our requirement that the drafting software be able to annotate 3D models drove some prices higher, especially for those systems without a stand alone drafting system. The Solid Edge and CADKEY offerings are particularly low due to their stand alone drafting function.

Each of the vendors submitted bids for systems meeting the following requirements:

| <u>Function</u> | Number of seats | |
|---|----------------------|-----------------------|
| | <u>5 seat system</u> | <u>11 seat system</u> |
| Detailing/Drafting of the design model | 2 | 2 |
| Basic Surface and Solid Modeling <i>plus</i> Basic Shading | 2 | |
| Basic Manufacturing (up to 3-axis NC programming and output on the design model) | 1 | |
| Advanced Surface and Solid Modeling | | 2 |
| Advanced Surface/Solid Modeling <i>plus</i> Advanced Assembly capabilities | | 2 |
| Advanced Surface and Solid Modeling <i>plus</i> Full-function Shading | | 1 |
| Display and Markup of the design model, raster or model | | 2 |
| Advanced Manufacturing (2-5 axis NC programming and output on the design model) | | 2 |
| Basic Data Management | | 11 (5 simult) |

SolidDesigner offers the unusual capability to split modules out from the bundle pricing. A drastic change occurred as opposed to last year for Catia, with the price dropping almost in half.

CATIA, Pro/E, and Unigraphics have the highest per seat prices for surfacing - solid modeling. Not surprising considering their higher function. Catia this year dropped into the mid range category for 5 seats with their new mid range Windows offering.

Manufacturing (for 3 axis milling) ranges the gamut, ranging from a low of just over \$4K for Inventor using Basic EdgeCAM, to \$22k for Unigraphics manufacturing. CADKEY's price is unusually high, partly because they include an additional seat of modeling, but 3D Virtual Gibbs Milling and Turning appears to be

TechniCom and costs \$1,995.

About TechniCom

TechniCom, founded in 1989, specializes in market research, analysis and consulting for the mechanical CAD/CAM Industry. The company publishes the CAD/CAM Watch newsletter. TechniCom has extensive experience in developing, producing, and documenting the highest quality benchmarks for the mechanical CAD/CAM industry.

WHY ORDER THIS REPORT?

Published April, 2001, this 205 page, 18 chapter report reviews the pricing of fifteen of the leading mechanical software vendors bidding on two hypothetical customer configurations. Details on their bids and pricing of their software is included as well as policies, such as discounts and warranty. Users considering a large scale purchase owe it to themselves to review these competitive prices, while vendors will want to examine their competitive positions. Many graphs and charts explore the differences among the offerings and recent trends. An included spreadsheet contains the details.

an expensive solution. Readers should investigate whether there is additional function in this package to justify the additional cost.

The report goes on to review pricing by function and discounts and contains a section for each vendor with more details on their pricing, software descriptions and offering conditions.

The full report, with 13 chapters, is available directly from

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- UGS - Unigraphics
- VX Corp. - VX CAD and VX CAM
- Spreadsheet diskette with 275K of details
- Each of the vendor sections contain:
 - Bid Responses
 - Product Descriptions
 - Software Pricing
 - Offering Conditions

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