

The Daily Telegraph

C A D C A M

C L I N I C

DIY CADCAM AUDIT

How successful are your CADCAM and engineering computer systems?

To make a simple economic assessment, add up the annual costs and benefits in each of the following areas:

| | £ per annum |
|---------------------------------------|-------------|
| Faster drawing production | |
| Reduced lead times | |
| Improved product quality | |
| Enhanced market image | |
| Reduced production errors | |
| Increased sales | |
| More accurate quotations | |
| Improved communications | |
| Other strategic and tactical benefits | _____ |
| Total annual cost benefits | _____ |

| | £ per annum |
|-----------------------------------|-------------|
| Hardware maintenance | |
| Software maintenance and licences | |
| Training | |
| System management | |
| Other costs | _____ |
| Total annual running costs | _____ |

If the benefits do not exceed the costs by an amount equivalent to one third of the capital cost of the system, then either you are making ineffective use of CADCAM, or you are using overly expensive systems for your particular requirements.

To obtain a measure of how well you are exploiting the full capabilities of CAD/CAM, count how many of the following techniques you use:

- 1 2D symbol libraries
- 2 Parametric symbol libraries
- 3 3D model libraries
- 4 Symbol libraries with attribute data
- 5 Menus to access symbol libraries
- 6 Other user menus
- 7 Drawing layers used for structuring drawing data
- 8 Text, line types or attributes used for special functions
- 9 Symbol or block structures to logically link drawing elements
- 10 Parts lists generated from assembly or layout drawings
- 11 Data links to production control or costing systems
- 12 Other parts list data links
- 13 Geometry data links to stress analysis or NC programming systems
- 14 Other geometry data links
- 15 Data links to suppliers' or customers' CAD systems
- 16 Macros to automate repetitive draughting tasks
- 17 Design calculation programs
- 18 Geometric property analysis programs
- 19 Parametric design programs for families of similar-to parts
- 20 Other design or drawing analysis programs
- 21 Wiring or piping connectivity analysis
- 22 Data links for point-to-point wiring or piping data
- 23 Procedures for making security back-ups of drawing files
- 24 Procedures for archiving completed projects
- 25 Drawing issue and control procedures
- 26 Linked database used to help select compatible components
- 27 Linked database used to identify similar-to designs

If you score:

- More than 12 out of 27 - publish an article to show others how it is done, you are in an elite minority of CAD/CAM systems users.
- More than 6 out of 27 - you are on the road to making CAD/CAM work well, although you could probably make further improvements.
- Six or less - you are almost certainly under-utilising CAD/CAM and are probably producing simple "pictures" with little or no structure to the data rather than building up an engineering database with potential for expansion into other application areas. Even the basic QA and security procedures may be lacking, leaving you exposed to loss or corruption of data as a result of system failures or user errors.

CAD/CAM '92

**10-12 MARCH 1992
NEC BIRMINGHAM**

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The CAD/CAM EXHIBITION is the definitive event for the design and manufacturing industry.

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