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CADCAM AUDITS

Annual audits are essential to ensure maximum benefits are being obtained from your initial and on-going investment in CAD/CAM.

Costs and Benefits

Comparing the actual and estimated costs associated with CAD/CAM should be relatively easy. Measuring the benefits achieved may not be so easy but you should check:

- Are the expected benefits being achieved? If not, why not?
- Are other unforeseen benefits being achieved?

Both direct and indirect benefits should be monitored, not just direct time savings. For example, consequential savings in other departments may be substantially greater than those achieved in the engineering departments actually using CAD/CAM. The analysis of indirect benefits will require a somewhat subjective analysis, but supporting quantified data should be sought wherever possible. Especially useful are before and after CAD/CAM comparisons of such statistics as:

- Customer enquiry to order conversion ratios
- Numbers of drawing and NC program errors
- Lead times for new product introductions

Also operator group meetings can be used to elicit views on the benefits achieved as well as on the drawbacks and aspects in need of improvement.

System Usage

CAD/CAM system usage should be analysed on various parameters such as:

A By user:

- Are enough operators trained?
- Is the level of training adequate?

B By Project:

- Is the optimum mix of work being handled on the system?
- Check the database contents for unnecessary data — duplicated data — inaccurate data
- Are management and operating procedures adequate?

C By category of work eg: schematic, 2D, 3D, NC, training etc:

- Is the system suited to your requirements?
- Is some system customisation required?
- Is extra hardware or software required?

Planning for Enhancements

An annual review to consider and cost the available options to improve CAD/CAM operations is well worthwhile. Assuming that your audit has identified demonstrable benefits it will be much easier to justify system upgrades than it was the initial purchase. However, there are always some options which may cost little or nothing, for example:

Sell the system

Alter the mix of work

Increase utilisation by working longer hours

Options requiring additional investment include:

Purchase extra hardware or software

System customisation

Additional training

Many first users quite sensibly opt for a turnkey solution so as to minimize the potential problems in the early stages. However, experienced users should evaluate non-turnkey options seeking out third party suppliers for:

Hardware

Software

Maintenance

Training

This information note is published by The Daily Telegraph and was prepared by Roger Billsdon of the Cambridge based CAD/CAM Consultancy and Software House ADE Analysis & Design Engineering Ltd who may be contacted on (0480) 66209