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C A D C A M

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CADCAM TRAINING

Many companies seem quite happy to spend vast sums on CAD/CAM systems, but then begrudge the relatively small amounts required to ensure staff are sufficiently trained to be able to exploit the technology.

Awareness Training

Awareness of CAD/CAM technology and the strategic reasons for installing it in a company is vital to:

- Encourage commitment
- Reduce fear of the unknown

Before a system is even installed awareness should be built up so as to prompt management to consider the strategic importance of CAD/CAM and how it may be extended beyond simple 2D draughting and used to breakdown traditional departmental barriers. For example:

- Could design data be used elsewhere?
- Could parts list data be transferred to production control or costing systems?
- Could component geometry be transferred to NC part programming or design analysis systems?

Management Training

Engineering managers with staff who use CAD/CAM systems will make many decisions vital to the success of CAD/CAM. To make effective and informed judgements they must have a clear understanding of the strengths and weaknesses of CAD/CAM. For this they need hands-on training, but full operator training covering the detail of all the options available is clearly unnecessary. Attending a few demonstrations at system suppliers or exhibitions is no substitute for actual hands-on training.

System Supervisor Training

The system supervisor plays a vital role and unfortunately all too often they are poached by other users or, even more insulting, the system vendor! An experienced system supervisor is a valuable asset to any company about to install a system, as they can considerably reduce the time required to get the system into full productive use. You should choose your system supervisor carefully and then try to ensure adequate levels of motivation and reward.

CADCAM system vendors often prove rather inept at more advanced or company specific training programmes. Hence for system supervisor and other management training courses you should consider other sources such as:

Consultancy organisations

Colleges or polytechnics

Computer hardware manufacturers

Operator Training

This is the best developed area of CAD/CAM training. Nevertheless the following key points learnt from the experience of others may help you develop effective operator training plans.

The first batch of operators should be very carefully selected and they should be trained off-site by the system supplier. Other operators are then usually more effectively trained in-house by these trained colleagues. Alternatively, if you have one of the more popular systems, you may be lucky enough to find a nearby college or CAD/CAM bureau offering operator training courses.

After each training course, operators should be allowed time to practice and consolidate their newly acquired knowledge; as a minimum three times the course duration should be allowed.

The optimum number of operators to have trained depends a lot on your particular circumstances and methods of working, but remember to include an allowance for staff turnover plus about 10% to allow for those who do not take to the technology.

Conclusion

Training is expensive and time consuming and those you train may then be poached by other companies. Nevertheless if you cut corners on training you will certainly find that CAD/CAM is not exploited to the full due to an inadequate appreciation of the capabilities and potential of CAD/CAM.

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