

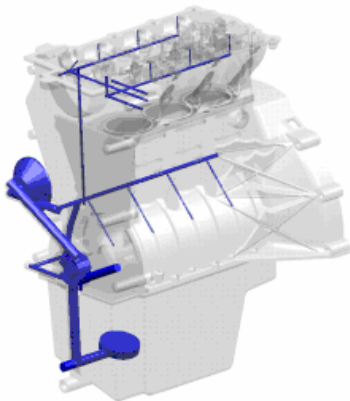
Maximise the benefits of moving to 3D Design



Are you getting the best out of 3D Design? Have your processes changed to suit the new toolsets? Are you well enough appraised of the tools available to make judgements?

THE FACTORS on which a decision to move to 3D CAE should be based are many and varied. Business conditions, market competitiveness, product portfolio, and workforce skill level are but a few, but serve to illustrate the importance of making the right decision.

CATIA V5 boasts a full range of solutions for design, analysis, manufacture, visualisation and more and was conceived with the entire business community in mind. Software configurations are available for OEM to sole trader, enabling the smallest company to benefit from the range of products that make up the V5 family.



So does it make sense to invest in 'value' systems now the big software vendors have recognised the importance of the smaller enterprise? Increasingly medium size businesses are realising that investing in CAE means buying a system that can grow with the company. If you were an OEM putting work out to tender, compatibility of CAE data would be a factor in your decision. Furthermore, the forward-thinking small business will recognise the benefits of selecting a product whose functionality and reliability develops in line with the challenging demands of the OEMs, whether they deal directly with an OEM or not. With tightening legal requirements, and companies being pressed further towards watertight quality systems and

thorough recording of design history, the need to keep data in its original format is increasing. In addition, more and more large companies are subcontracting work, which they have a need to review frequently. To facilitate this, an OEM might insist suppliers take on their chosen CAE system. This can be viewed as an obstacle by the smaller business, or an opportunity, but either way the saving to the OEM in data translation effort alone is significant.

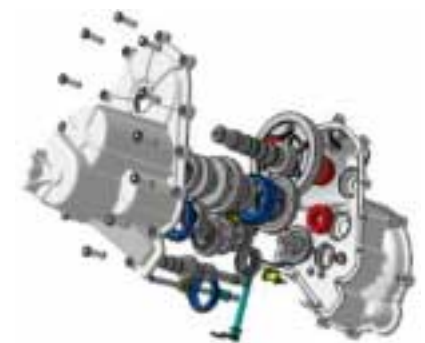
PRODUCT DATA MANAGEMENT

With the growth of a company's electronic data infrastructure comes the need for efficient management of information. CAE data, spreadsheets, written documentation, and other information all need to be controlled. Whilst the small enterprise may be able to manage without, it is likely a well-configured data management product will be beneficial to all businesses. 'SMARTEAM' is a good example of a Product Data Management system (PDM) with the ability to manage multiple data types (independent of CAE system) and share data between companies whilst controlling access.

COLLABORATIVE DESIGN

The design process in CATIA V5 builds on the fundamental benefit of data format stability, by introducing tools designed to support collaborative working. So, in the case of complex parts or assemblies, work can be shared between multiple designers by creating a 'master model' which individual designers access to extract key features. An example would be a complex moulding or casting, where features such as bolt bosses are shared between internal and external cores. The master model would contain the basic bolt boss features and the internal and external core models would contain linked copies of these features. The key to this process is the link function, which means that models containing linked copies are

given notice of changes to the master model, and can then be updated to match. This means multiple designers can work on sections of a complex part while the overall design is still evolving, reducing lead-time considerably.



AUTOMATED INTELLIGENT DESIGN

Intrinsys have pioneered a design process based around a parametric, knowledge-driven 'template model' of a component. Once created, the template contains the building blocks for a variety of design iterations. By working through a structured series of questions, driving dimensions and information for the template model are extracted from reference documents (standards, company records, parts database, etc.). The resulting model meets all specified requirements and forms a repeatable basis of a rapid design process.

CONCLUSION

Maximising your return from 3D CAE investment means changing your processes. Significant improvements in quality, time to market and productivity can be realised, but you must be prepared to look closely at how you operate and invest in products and processes that will deliver the improvements you seek. CATIA V5 offers a fully integrated suite of products designed to make 3D collaborative engineering work at every stage of the design process, and is the perfect choice for small business and OEM alike.

www.intrinsys.co.uk