TECHNOSOFT
ADAPTIVE MODELING

TIE

Tool Integration Environment

TIE provides a completely graphical environment for product and process modeling, integration, and optimization. TIE includes a wide selection of intuitive modules to make it easy to interface with common engineering tools.

- **ExceLink** to interface to data and macros in Microsoft Excel spreadsheets

- **VisualParse** to extract data from (or generate) text files for proprietary or legacy programs

- **ProgramLink** to automate execution of local or remote programs or batch files

- **FunctionLink** to run functions or subroutines in external libraries (DLLs).

- **CADLink** to interface with dimensions, parameters, and geometry in CAD models.

AMOpt

TechnoSoft's AMOpt can be used within TIE to perform optimization, probabilistic design, and various trade studies. AMOpt provides a wide variety of methods, including gradient-based optimization, a genetic algorithm, design of experiments, Monte Carlo simulation, and response surface methodology, all within an easy to use graphical environment, consistent with TIE.
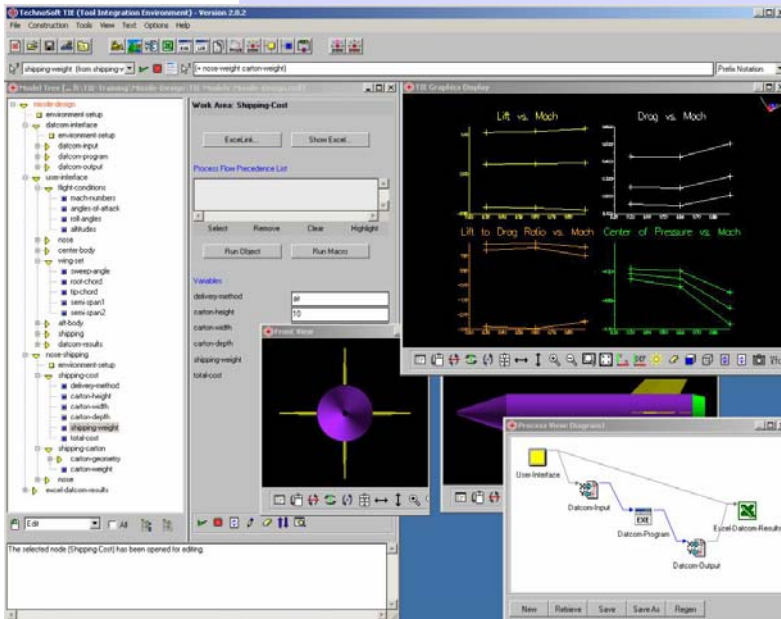
AMSketcher

Knowledge-based geometry models built in TechnoSoft's AMSketcher can also be used with TIE. This enables engineers to integrate fully parametric solid, surface, and wireframe geometry with other multidisciplinary design and analysis tools.

DMM

Multiple TIE (or AML) models residing on distributed, disparate computing platforms can easily be linked together using TechnoSoft's Distributed Modeling Manager (DMM).

AML

TIE also provides a convenient environment for deploying powerful AML objects. AML developers can create generative interfaces to complex tools, and TIE users can easily link them into a TIE model in a plug-and-play fashion. For example, the parameters of a Nastran analysis can be linked within TIE to an Excel® based cost model, a file-based FORTRAN code, and a Pro/ENGINEER® CAD model, and then driven using a DLL-based optimization algorithm.

*Built on proven AML technology, **TIE enables engineers** to integrate proven tools, automate processes, perform multidisciplinary design exploration and optimization, and ultimately **design better products, faster.***

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