



The Enterprise Solution for Product Innovation



# HyperWorks Process Manager™

## Streamlining Product Validation Processes

In today's highly competitive and demanding design and validation environment, organizations are looking for ways to eliminate re-work, reduce costs, eliminate manual input of data and improve overall productivity. Such requirements can only be met by capturing the best practices and making them available throughout the organization in a standardized manner.

Altair's HyperWorks Process Manager framework enables organizations to deploy such standardized processes. These processes not only can drive HyperWorks applications, but also are able to easily interface with third-party applications such as CAD and PDM systems, thus streamlining the design validation process.



# HyperWorks Process Manager™

Altair HyperWorks Process Manager enables rapid development and deployment of process automation applications in the CAE domain. Process Manager is a programmable, personal workflow manager that guides users through standard work processes.

- Standardize CAE processes.
- Minimize CAE analysis set-up time.
- Rerun previously conducted CAE processes.
- Provide integration with CAD, PDM systems, databases, intranets and job submission systems.
- Streamline CAE activities.
- Establish and distribute "best practice" processes corporate-wide.



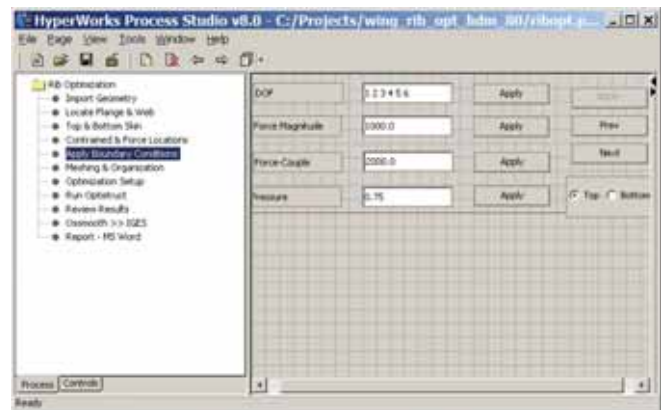
## BENEFITS

### Best Practices

A CAE task involves a series of steps that an analyst performs:

- Import design geometry
- Build CAE model
- Set-up loads and boundary conditions
- Run analyses
- Interrogate results
- Recommend a better design

Companies invest time to develop CAE methods that provide the best results. These best practices can be captured using Process Manager and distributed throughout an organization. Process Manager lets companies implement standard CAE procedures for a variety of CAE problems.



### Process Automation and Guidance

Process Manager delivers productivity gains and quality improvements through:

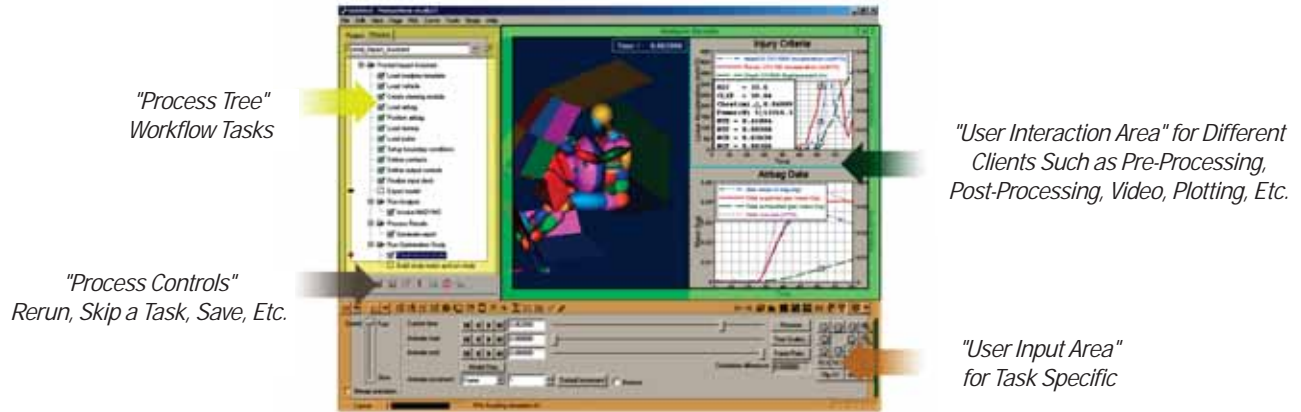
- Standard process flow
- Reduced manual input
- Checks for input validity
- Reduced duplicate data entry
- Faster and effective training
- Maximized resource usage
- CAD/PDM/Systems integration
- e-Services integration
- ISO integration

### Systems Integration

An effective CAE process needs the most up-to-date data, which is typically stored in a variety of databases and PDM systems, as well as access to corporate computing services. Process Manager lets engineers access data and services through re-usable software modules.



## USER INTERFACE FEATURES



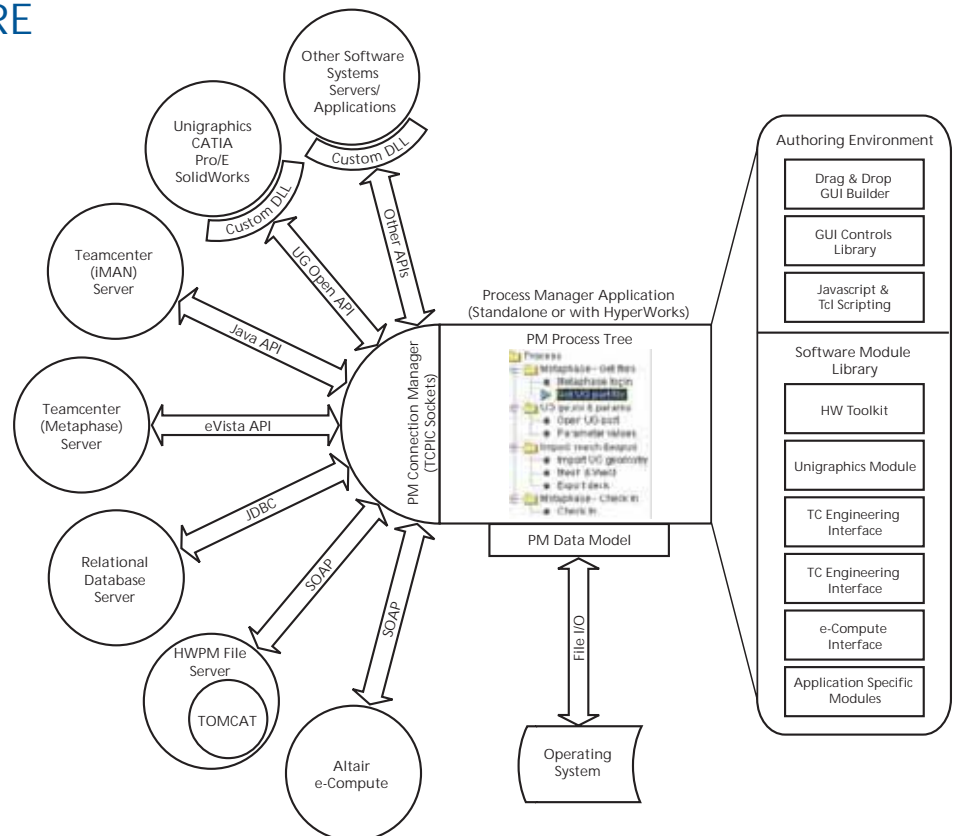
HyperWorks Process Manager GUI Interface

- Process Manager client is integrated with the HyperWorks desktop.
- The "Process Tree" displays a series of steps the user executes.
- A simple checkbox is used to mark completed steps.
- The interface provides the ability to re-execute an individual or series of steps automatically.
- Each process can be run in an interactive or automatic mode.
- Break-points can be set to stop at any step for user input if/when appropriate.
- The state of the project can be saved to a persistent file.
- Process Studio is available for authoring Process Manager templates.

## INTEGRATION ARCHITECTURE

### Software Components

- Process Manager manages connections with different applications and systems using TCP/IP sockets.
- Interfaces with different systems are implemented using re-usable software modules.
- Software modules can be developed using Java programming language or Tcl/Tk scripts.
- Process Manager and the software modules can run on any hardware that supports Java and Tcl/Tk.
- Interface modules can be used by any Process Manager application.
- Process Studio enables the drag-and-drop creation of process trees and dialogs.
- Third-party Java Beans can be included in the processes.
- Previously written HyperWorks macros can be easily migrated into processes by way of Process Studio.





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