

Classic Jack

A premier human simulation tool for populating your designs with virtual people and performing human factors and ergonomic analyses

fact sheet

Siemens PLM Software

www.siemens.com/tecnomatix

► Summary

Classic Jack is a human modeling tool that enables you to improve the ergonomics of your product designs and refine industrial tasks. Classic Jack and its optional toolkits provide human-centered design tools for performing ergonomic analysis of virtual products and virtual work environments. Classic Jack enables you to size your human models to match worker populations, as well as test your designs for multiple factors, including injury risk, user comfort, reachability, lines of vision, energy expenditure, fatigue limits and other important human parameters. Classic Jack facilitates cost and time savings by improving product quality early in the product lifecycle.

Benefits

Human interaction during the design, build, and sale stages of a product lifecycle is inevitable; Classic Jack helps you assess the human element throughout this process.

Classic Jack saves your company time and money while enabling you to create more human friendly designs.

Classic Jack provides a one-stop shop for all your ergonomics and human factors needs, offering a comprehensive suite of analysis capabilities.

Classic Jack enables you to uncover human performance and feasibility issues early in the design process; you can invest a little and save a lot.

Classic Jack enables you to communicate issues effectively and visualize potential solutions.

Features

Human figures that are anthropometrically and biomechanically accurate, as well as aesthetically pleasing

Broad set of anthropometric databases for representing your population

State-of-the-art task simulation engine to generate a series of human activities through the use of high level commands

Classic Jack enables you to seamlessly integrate human factors and ergonomics into the planning, design and validation stages of your product lifecycle. Organizations that use Classic Jack gain a significant competitive advantage thanks to classic ergonomic and human factors assessment techniques coupled with the latest visualization and simulation technologies.



The Classic Jack solution provides the latest human simulation capabilities, including:

- *Task simulation builder*, which enables you to use high level commands to instruct the human model in your 3D virtual product and work environment. This capability facilitates quick animation and scenario development. Once a particular task sequence has been defined for the human model, you can easily test what-if scenarios by swapping in human figures of different sizes or by moving objects in the environment. Human postures and motions are automatically re-computed to reflect the updated scene. The simulation even provides time estimates based on standard time tables.
- *Human posturing techniques*, which enable you to quickly and accurately posture the human models with minimal input. Classic Jack boasts some of the most sophisticated methods for figure manipulation and posture prediction available today.
- *Smooth skin human modeling*, which employs deformable mesh technology to represent visually and anthropometrically accurate body forms
- *Advanced hand modeling*, which provides a premier solution for representing hand anthropometry and other features
- *Customization capabilities*, which include an easy-to-access scripting/programming interface to create analysis and interface add-ons that you can use to extend and custom fit Classic Jack to your business needs (many of these customizations are made available to the Classic Jack user community)

Features continued

Industry leading human manipulation and figure control to create simulations faster and more accurately

Most comprehensive set of human performance simulation tools available today

Extensive motion tracking and virtual reality support

Human performance capabilities

ANSUR, NHANES, NA_Auto and Canadian Land Forces anthropometric databases

Vision envelop creation

Reach envelop creation

Hand clearance and interference study capabilities

Ergonomic analysis tools, including static and real-time fatigue, low back analysis, material handling limits, energy expenditure, NIOSH, OWAS, RULA, static strength prediction, time standards and a new ForceSolver

Occupant packaging tools, including comfort assessment, posture prediction, SAE packaging guidelines, pedal behavior; as well as multiple vision zones including reflection, coverage and obscuration

System requirements

Windows XP and Vista

Minimum:

1GHz processor

1GB RAM

200MB free disk space

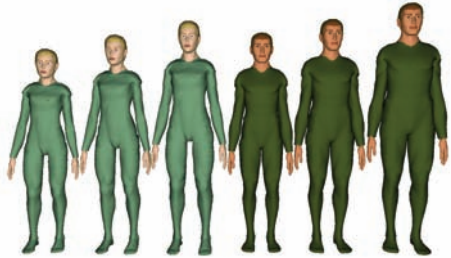

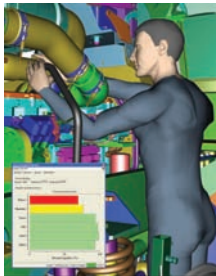



Recommended:

2GHz processor

2GB RAM

200MB free disk space

Using Classic Jack

1. Create a digital human. You can select the type and size of the human model you want from an easy-to-access human library.
 
2. Posture the manikin or create a simulation. Using a variety of posturing methods, you can rapidly position the human figure to interact with surrounding objects in a virtual environment. For animations, you can use the task simulation builder to quickly define task sequences through high level commands such as GET, PUT and WALK.
 
3. Analyze human performance. Using ergonomic analysis tools, you can determine if your population will be able to complete each task or activity. Classic Jack's occupant packaging tools help you understand how a human will interact with your vehicle designs.
 

4. Experience virtual reality. Classic Jack provides interface drivers to a wide range of motion capture hardware devices, including real-time whole body trackers and data gloves. This capability enables you to experience your design first hand, quickly identify human factors issues and discover alternative processes and designs that will improve your product.
 




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