



WORKPLACE ERGONOMICS SOLUTION

Ready-to-use Ergonomic Solution to Design, Simulate, Analyze and Validate Worker Assembly and Maintenance Tasks

Overview

Your Workforce is as Important as the Products they Manufacture. Targeted for consultants and SMB companies that want to study basic and advanced ergonomics issues within their manufacturing environments, DELMIA offers a ready-to-use, role-based ergonomics solution to evaluate and explore human activity in the workplace. HUMAN WORKPLACE SIMULATION and HUMAN WORK ANALYSIS provide such organizations with ergonomic tools specifically geared towards understanding and simulating the worker task for the products they manufacture, install, operate and maintain.

Manufacturing organizations around the world continue to design and develop machines, vehicles, and products that are capable of performing better, faster, and longer. From a factory worker to an aircraft pilot—today's manufacturers must consider Human Factors (HF) criteria early in the product lifecycle.

Easy-to-Build Virtual Worker for a Realistic Manufacturing Environment HUMAN WORKPLACE SIMULATION and HUMAN WORK ANALYSIS offer a user-friendly interface and ensures that first level Human Factors studies can be undertaken by non-Human Factors specialists. Simple pull-down menus are used to create male and female standard manikins (Name, Gender, 5th, 50th, 95th percentile).

The sophisticated manikin structure consists of 99 independent links, segments and ellipses. In addition, the manikin possesses fully articulated hand, spine, shoulder, and neck models to accurately reproduce natural movement.

Manikin vision assessment permits a designer to understand what an operator or maintainer would "see" in a task environment. A separate vision window displays the vision field from the manikin's perspective to assess visual interference or limitations.

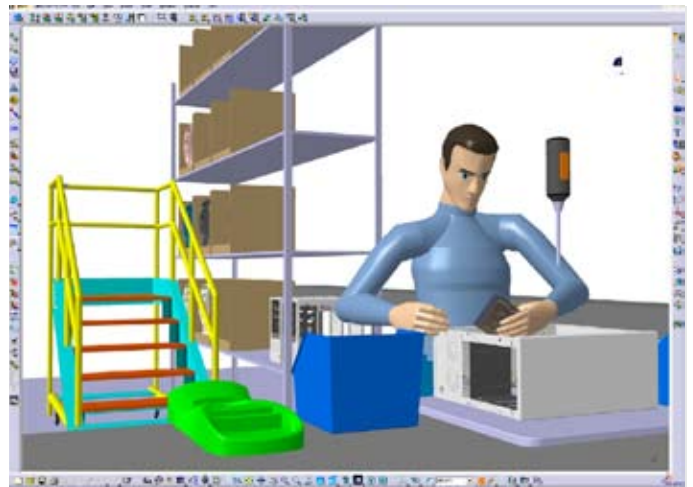
Save Time, Cost and Improve Accuracy and Safety of your Workforce. HUMAN WORKPLACE SIMULATION and HUMAN WORK ANALYSIS both offer powerful human modeling tools to create, validate, and simulate activities for "workers". Evaluate common performing activities within your manufacturing environment where they may walk to a specific location, move from one target posture to another, following the trajectory or path of an object and pick and place parts in the work area.

Users can also constrain specific segments of the worker to parts or tools in its environment. Those can be associated to selected 3D objects in the environment and stored. They can then be re-used to update the posture the next time the activity is modified.

Human Catalogs feature allows the user to save time and enhance efficiency in building human models. Catalogs are similar to a preset library, where you can create, save, and reuse predefined manikin attributes. The catalogs are easy to use and provide great flexibility to answer any type of user needs. Under the manikin structure, several aspects of a manikin can be saved in a catalog, such as anthropometry, tools, posture, clothing, tasks, and other related manikin characteristics.

For advanced analysis tools, HUMAN WORK ANALYSIS allows the user to perform risk factor analysis to maximize human comfort, safety, and performance through a wide range of advanced tools that comprehensively evaluate important elements of a human's interactions with a workcell. Advanced ergonomic analysis tools for, reach, space and lifting/lowering, repetitive motions, biomechanics, fatigue and posture analysis ensure conformance to factory standards and maximizing efficiency.

- *Lifting, lowering, and carrying tasks using the NIOSH 81 and 91 equations*
- *Push & pull tasks using the SNOOK and CIRIELLO equations*
- *RULA for arm position assessment, with the ability to customize RULA specifications*
- *Biomechanics for workload*
- *Energy expenditure for fatigue*

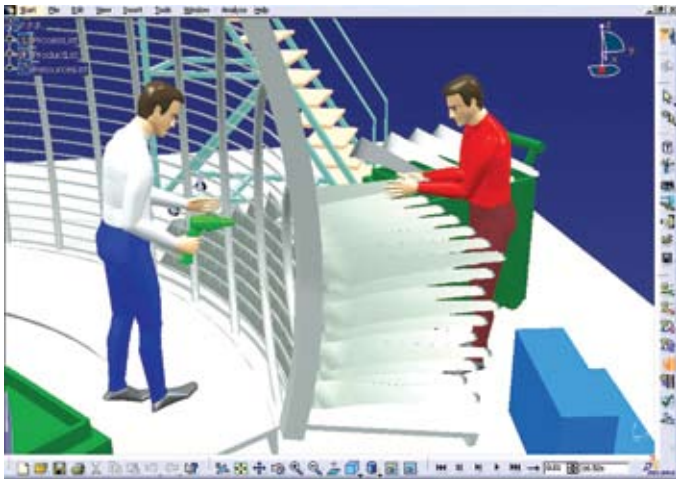


Key Functionality

- Intuitively insert accurate virtual humans into the powerful V5 simulation environment
- Explore and analyze multiple worker scenarios using different anthropometry for vision, reach and clearance
- Import/insert 3D CAD geometry into the HUMAN Workplace Simulation environment
- Position manikin(s) at appropriate locations for seamless interaction with product geometry
- Simulate human activities such as Move-To-Posture, Walk, Pick and Place, Climb Up/down Stairs and Ladders
- Create HTML-based reports

Benefits

- Open architecture for customization and extension
- Address specific ergonomic needs such as Reach, Vision, Clearance, and Space
- Reduce errors with manual feedback on critical stations
- Reduce number of physical prototypes
- Validate worker interactions within the workcell
- Enhanced ease of use for rapid deployment
- Take human factors into account early in the process design phase



For more information on DELMIA, visit our website at www.delmia.com

About Dassault Systèmes:

As a world leader in 3D and Product Lifecycle Management (PLM) solutions, Dassault Systèmes brings value to more than 100,000 customers in 80 countries. A pioneer in the 3D software market since 1981, Dassault Systèmes develops and markets PLM application software and services that support industrial processes and provide a 3D vision of the entire lifecycle of products from conception to maintenance to recycling. The Dassault Systèmes portfolio consists of CATIA for designing the virtual product - SolidWorks for 3D mechanical design - DELMIA for virtual production - SIMULIA for virtual testing - ENOVIA for global collaborative lifecycle management, and 3DVIA for online 3D lifelike experiences. Dassault Systèmes is listed on the Nasdaq (DASTY) and Euronext Paris (#13065, DSY.PA) stock exchanges. For more information, visit <http://www.3ds.com>

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