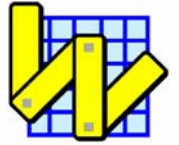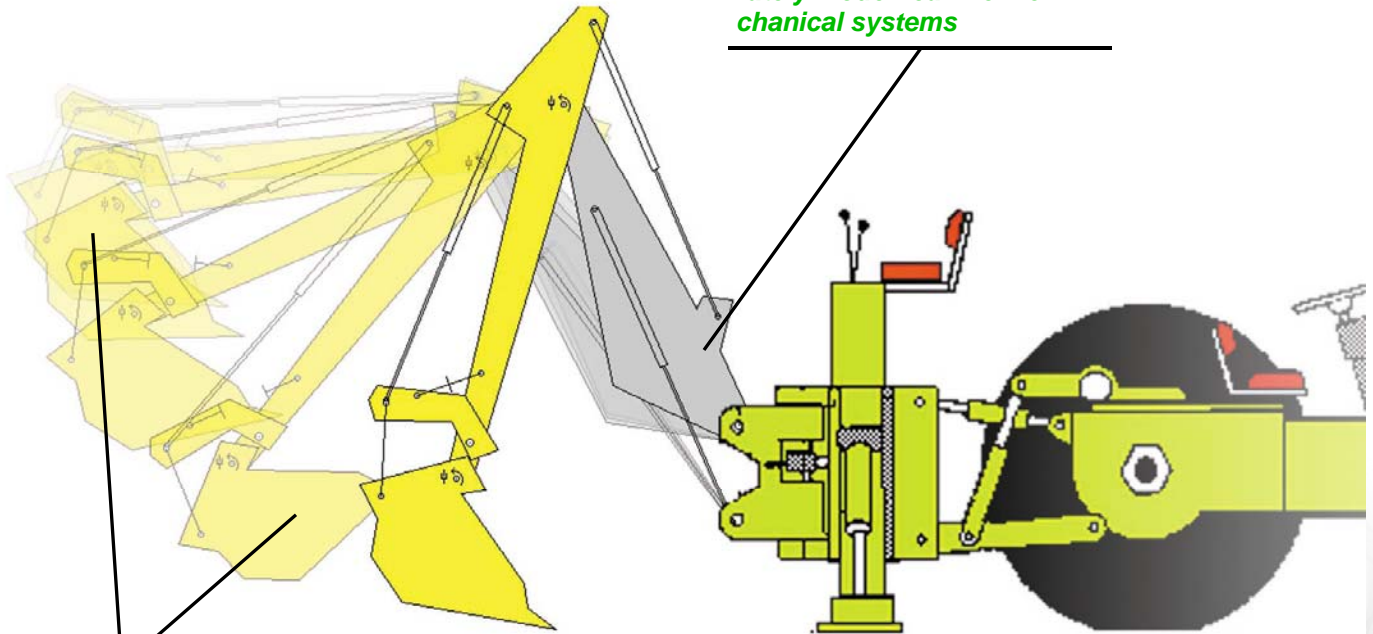![dst Design Simulation Technologies logo]

# Working Model 2D

## The world's most popular 2D computer aided engineering tool

*Use automatic collision detection and friction to accurately model real-life mechanical systems*

*Track the motion of an object under specific simulation parameters*

- Powerful physics-based 2D kinematic and dynamic motion simulation and analysis

- Provides accurate solutions to complex engineering motion simulation problems

- Save time and money by avoiding expensive prototyping and product failures

*Record and display simulation data in realtime*

www.workingmodel.com
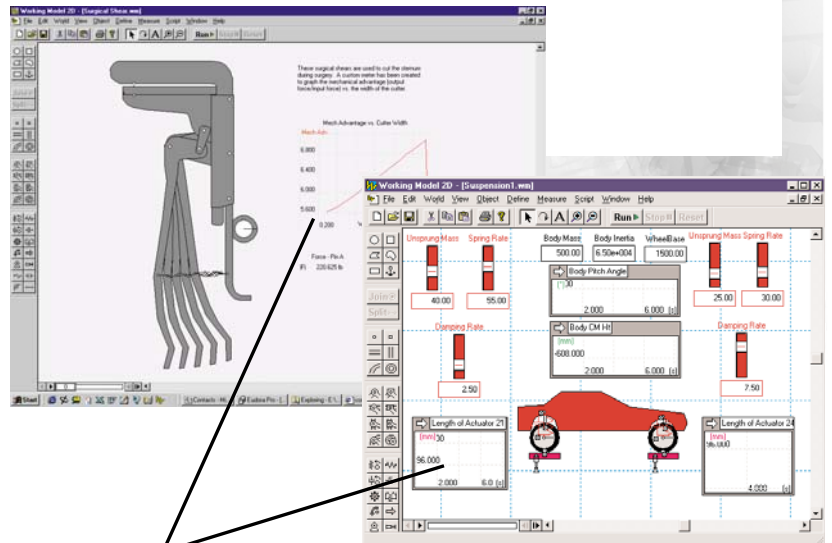
## SUPPORTED 2D FORMATS

- DXF file format

## BODY PROPERTIES & FEATURES

- Body types: circle, box, polygon and smooth (b-Spline edges)
- Mass, density, geometry, center of mass, moment of inertia, velocity and angular velocity, electrostatic charge and more
- Track the motion path of a body
- Automatic collision detection and response
- Automatically applied static and kinetic friction

## CONSTRAINTS

- Pin, rigid, slot, keyed slot and curved slot joints
- Rods, ropes, pulleys and gears
- Linear and rotational spring/damper

## MOTION DRIVERS

- Motor
- Actuator
- Force
- Torque

Constraints and drivers can be defined by numeric or equation input in the formula editor, or with tabular data.

## UNITS SYSTEMS & FORMULAS

- SI, English, CGS and user-defined

## MEASURABLE PARAMETERS

- Position
- Velocity
- Acceleration
- Momentum
- Angular momentum
- Constraint force and torque
- Gravity, electrostatic and air force
- Kinetic energy, gravitational potential energy and power

Record and display simulation data in real-time with graphical and digital meters.

## SIMULATION CONTROL

- Run, stop, reset, single step, or pause the simulation at any time.
- Control the accuracy of your simulation by modifying integration and animation steps and configuration tolerances.
- Superimpose multiple simulations.

## INTERACTIVE CONTROLS

- Connection to Excel and MatLab
- Complete "Visual Basic" style scripting language with built-in debugger
- Menu and script buttons
- "Player" mode for content creation

## VISUALIZATION

- Track the motion path of a body or its center of mass
- Attach graphics to bodies
- Images on bodies rotate
- Display system center of mass
- Multiple, moving reference frames
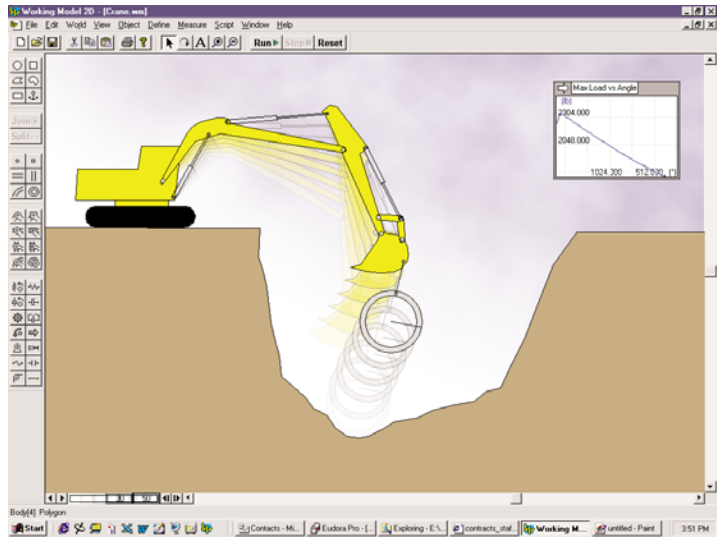
## SCRIPTS

- Optimize
- Create constraint
- Document model
- Zoom to extents
- Measure distance between points
- Flip polygon
- Multiple file run
- Pin friction
- Slot friction
- Slot damper
- Flexbeam
- Shear and bending moment

## OUTPUT

- AVI video files for playback
- Meter data from simulations to tabular data file

## PRINTING

- Print an image of your simulation or meter data

## WORKING MODEL 2D SYSTEM REQUIREMENTS

Window System

- Microsoft Windows 95/98/ME/2000/XP/Vista/Windows 7
- 1 GB RAM Minimum
- 60 MB disc space
- CD-ROM drive

Design Simulation Technologies