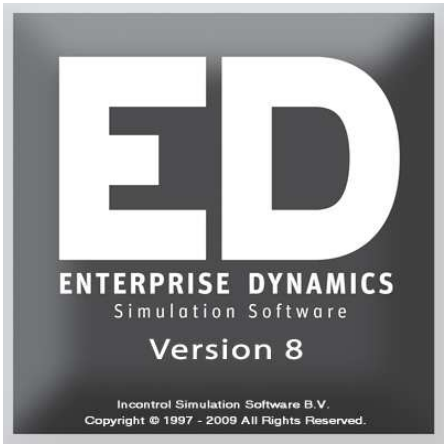
ED Menu structure and buttons



Simulation Software / ED Menu structure and buttons

Enterprise Dynamics®

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INCONTROL
Simulation Solutions

The menu structure

NB: An option displayed in *italic* is more suitable for the advanced user.

File	***Explanation***
New Model	Closes the current model and opens an empty model.
Open Model…	Closes the current model and opens an existing model.
Merge Model…	*Opens a model and includes this model into the selected atom or into the current model. Consequently, the existing model is not deleted.*
Save Model	Saves the current model under the same file name.
Save Model As…	Saves the current model under a new file name. The previous model remains.
Add Atom to Library…	*Loads an atom and places it at the bottom of the library.*
Save TreeAtom	*Saves the selected atom in the Library Tree to pdir([atoms]) if the workdir is set to pdir([Work]). Else the atom will be saved in Workdir([Atoms\GroupDir]).* An atom can only be saved if it is not a group atom and it is directly under a group atom or under the library. When an atom is successfully saved, a message will be displayed that and where the atom is saved.
Save Atom As…	*Displays a window allowing you to select an atom out of the library. Afterwards, the selected atom can be saved under a new name.*
Import	*This option allows you to import a 2D/VR (VR=Virtual Reality) icon or a VR sound. The icon or sound is added to the lists with icons and sounds that the user can allocate to an atom.*
Print 2D Layout…	Prints the 2D window on the standard printer.
Print Setup	Allow you to define the settings of the standard printer.
Preferences	This option displays a number of tabs to define the standard settings of Enterprise Dynamics.
Startup Script	*Allow you to modify the Start-up Script. This script is performed each time Enterprise Dynamics is started. The modifications have to be defined in 4DScript, the programming language of Enterprise Dynamics.*
Exit	Shuts down Enterprise Dynamics.

Model	***Explanation***
Create	Shows the library tree and the model layout window. You can build your own model by dragging atoms into the model layout.
Layout window	Shows the model layout window. Atoms can be created in this window either by dragging atoms from the library or by

	using the Taskbar.
Sublayout window	*Shows another layout window, but one hierarchical layer lower, e.g. the contents of a composition container.*
Model Tree	Shows the model tree. This 'model tree' gives a hierarchical overview of the atoms displayed in the model.
Library Tree	This option shows all the atoms in the library.

Simulate	***Explanation***
Run Control	Displays and activates the Run Control Window which is used to start, stop and modify the speed of a simulation run.
Clock	Displays the clock window.
Run	Starts the simulation run.
Stop	Stops the simulation run.
Stop and Reset	Stops the simulation run and resets the model.
History	Allows you to collect data during a single run of the model which allows you to afterwards generate graphs and reports from that run from the menu Results|Graphs. The option 'general history' needs to be checked. It is linked to the simulation via the run control window. When graphs and reports of a specific atom are requested, the history of this atom has to be maintained. The easiest way to achieve this is to select the option 'All on'. However, this results in the history collection of all atoms, which can lead to huge data files!

Results	***Explanation***
Summary Report	The Summary Report displays an overview of the basic statistics relating to all atoms present in the model, **based on a single run**. NB: For more detailed reports, the Report Atom can be dragged out into the model.
Graphs	Shows various graphs of atoms such as queues, histograms and pie charts, **based on a single run**. These graphs can only be created if the History option relating to the atom in question is switched on.

Experimentation	***Explanation***
Experiment Wizard	Displays the Experiment Wizard in which you can define and run your experiment. At first it guides you in defining your experiment settings such as the run length and a warm-up period and secondly the output variables (performance metrics PFM's). After defining the experiment you can choose to start the experiment.
Analyze Experiment Results	Allow you to display the report of an experiment.

Tools	*Explanation*
Atom Editor	*With the Atom Editor, you can adjust the functionality as well as the appearance of an atom.* *This very effective tool allows you to alter the behaviour of existing atoms and to create your own atoms. The programming language 4DScript has to be used here.*
4DScript Interact	*A window in which 4DScript can be entered. Direct execution of the command follows.*
Text Editor	*A simple text editor, the functionality of which can be compared to MS Notepad.*
Debugger…	*The debugger allows you to analyze your 4DScript code step-by-step while it is being executed.*
CAD Import wizard	Add on tool CAD Import wizard.
GUI Builder…	GUI is short for Graphical User Interface: it allows the user to create his own input fields.
Scenario Manager	The scenario manager assist you in running multiple simulation runs after each other. In this way you can start a scenario, go home, and find the results in the morning.
View Atom Labels	This option displays all labels of the selected atom (and of all atoms contained in that atom). Labels are variables and attributes the user can allocate to an atom.
Autofit	The Autofit function analyses a data set and searches for the best fit probability distribution.

Display	*Explanation*
2D Model Layout	Opens the 2D modelling window.
2D Model View	Opens the 2D visualization window. *Warning!* In this window, you cannot add atoms to the model or reposition existing ones. For this you must use the Model Layout window.
2D Model Subview	*Opens the same window as the 2D Model View option, but here, only the contents of the selected atom is shown.*
2D Background Color…	This option allows you to change the background color of your active 2D modelling window.
3D Model View	Opens the 3D visualization window.
3D Model Subview	*Opens the same window as the 3D Model View option, but here, only the contents of the selected atom is shown.*
3D Background Color	*Opens a color selection window. This option allows you to define the background color for the 3D window. This color will also be used in the VR window.*

Search	*Explanation*
Search Text or Atom	Opens the Search window.
TreeAtom in 2D Model view	Makes the AnimAtom the TreeAtom.
AnimAtom in Treeview	Opens the treeview and makes the TreeAtom the AnimAtom.
Mother of TreeAtom in Treeview	Makes the TreeAtom the mother of the selected TreeAtom.

Window	*Explanation*
Close all windows	Closes all open windows.
4DScript Overview	Shows an overview of all 4DScript expressions together with an explanation of their syntax. You can also open this window by pressing F2.
Error Monitor	*Opens a window displaying errors encountered in 4DScript.*
Tracer	*Opens the Tracer window. You can enter 4DScript expressions in this window.*
Layers	*You can create models on various layers allowing you to lock certain layers or to hide them. This can be very useful in large models where atoms are piled on top of each other.*
Resources Manager	*Opens a window in which all available atom icons are displayed.*
Graph Window	*Opens the most recent graph. It is not possible to produce new graphs in this window.*

Help Menu	*Explanation*
Help Overview	Gives you access to the complete manuals, consisting of the 3 following menu sub-units.
Quickstart	These documents cover and explain some of the new features of Enterprise Dynamics.
Tutorials	Includes various tutorials to teach you how to work with Enterprise Dynamics.
Add-ins	*These add-in help files contain some useful information of some the additional packages you can obtain of Enterprise Dynamics.*
Example Wizard	Opens the Example wizard. The Example Wizard contains some of the Example models that are included in ED.
About Enterprise Dynamics	Displays information regarding the version in use and about Incontrol Enterprise Dynamics.

Speed buttons on the Main Toolbar

There are several speed buttons available in the main toolbar. Some of these buttons are for standard File actions such as saving your model. Others can be used to show a special window such as the Model Layout and the Run Control. Most of the buttons are to quickly insert an atom in the Model Layout. There are also buttons for tools such as the Autofit tool or a tool to view the Labels of an atom.

File actions	***Explanation***
	Create a new model.
	Open model an existing model.
	Save the model.
	Save library. Asks for a library name and creates an .lbr file (in Pdir([Libs]) if workdir is pdir([Work]), else in WorkDir([Libs])) of the selected library atom(tree). This includes structuring using group atoms, creation of progress bar,
	Automatically creates a preregister file for all functions used in the library. Can be used to prevent errors when loading a library.
	Print the current view of the Model Layout.

Window actions	***Explanation***
	Show Model Layout and Library Tree.
	Show Model Layout in which you can build your model.
	Show the 2D model view. In this view you can only change the atom settings and not insert new atoms.
	Show the 3D model view.
	Show layer window. Create Layers and set the current Layer in the model. And change the settings of each layer, i.e., set whether atoms are visible, atoms are resizable, atoms are selectable or set if atoms can be deleted.
	Show the Library Tree.
	Show the Model Tree.
	*Show the Atom Editor.*
	Show the Run Control.
	Show the Clock.
	*Show the GUI Builder.*
	Show the 4DScript Interact window.
	Show the 4DScript overview.
	Show the text file editor.
	Show the Summary Report.
	Show the Graph window.
	Show the Help.

Insert atoms	*Explanation*
Basic modelling	
	Insert a **Source** atom in the Model.
	Insert a **Queue** atom in the Model.
	Insert a **Server** atom in the Model.
	Insert a **Sink** atom in the Model.
	Insert a **Container** atom in the Model.
	Insert a **Node** atom in the Model.
Processes	
	Insert an **Assembler** atom in the Model.
	Insert an **Unpack** atom in the Model.
	Insert a **Splitter** atom in the Model.
	Insert a **Multiserver** atom in the Model.
Product transformation	
	Insert a **Single transform** atom in the Model.
	Insert a **Multiple transform** atom in the Model.
Storage	
	Insert a **Warehouse** atom in the Model.
Transport	
	Insert an **Accumulating conveyor** atom in the Model.
	Insert a **Non-Accumulating conveyor** atom in the Model.
	Insert a **Transporter** atom in the Model.
	Insert a **Dispatcher** atom in the Model.
	Insert a **Destinator** atom in the Model.
	Insert a **Portal Crane** atom in the Model.
	Insert a **Robot** atom in the Model.
Network *Atoms necessary to build a Network for an Advanced Transporter or Operator.*	
	Insert a **Network node** atom in the Model.
	Insert a **Node Manipulator** atom in the Model.
	Insert a **Network Controller** atom in the Model.
Operators	
	Insert an **Operator** atom in the Model.
	Insert a **Team** atom in the Model.
	Insert a **Call Operator** atom in the Model.
	Insert a **Free Operator** atom in the Model.
Time	
	Insert an **Arrival List** atom in the Model.
	Insert a **User Events** atom in the Model.

Tools	
	Insert a **Composition Container** atom in the Model.
	Insert an **Empirical Distribution** atom in the Model.
Availability	
	Insert an **Availability Control** atom in the Model.
	Insert a **MTBF MTTR availability** atom in the Model.
	Insert a **Time schedule availability** atom in the Model.
Flow control	
	Insert a **Lock** atom in the Model.
	Insert an **Unlock** atom in the Model.
	Insert a **Condition Control** atom in the Model.
	Insert a **Notify Router** atom in the Model.
Visualization	
	Insert a **Text Box** atom in the Model. Insert Static text in the 2D Model
	Insert a **Bitmap Box** atom in the Model. Insert an Image in the Model
Results	
	Insert a **Monitor** atom in the Model.
	Insert a **Status indicator** atom in the Model.
	Insert a **Status monitor** atom in the Model.
	Insert a **Status histogram** atom in the Model.
	Insert a **Status monitor stacked bar** atom in the Model.
	Insert a generic **Circle diagram** atom in the Model.
	Insert a generic **Histogram** atom in the Model.
	Insert a **Scatterplot** atom in the Model.
Data	
	Insert a **Table** atom in the Model.
Data atoms to establish a DDE connection with other applications	
	Insert a **Word** atom in the Model.
	Insert an **Excel** atom in the Model.
	Insert a **Database** atom in the Model.

Tools	***Explanation***
	Show the Autofit tool.
	Show the Label window containing a table with the Labels of the atom selected in the Model Layout and of the atoms contained in the selected atom.
	*Show a window that you can use to add attributes and corresponding access functions. This form is meant for the expert user.*

Debugging tools	***Explanation***
	Show the Tracer Window.
	Show the Error Monitor.
	Show the Watches.
	Show the Debugger.

Search tools	***Explanation***
	Find the selected tree atom in Model Layout.
	Find the atom selected in the model layout, i.e., the AnimAtom, in the model tree.
	Find the mother atom of the selected tree atom.
	Tool to find general text, code or atom in specified area such as the library or the Model.