What's New (Official Release 7.0)

In Enterprise Dynamics 7.0 a lot of developments have been spend on improving the visualization engine even further. It is now possible to use individual meshes within a 3D object that enables you to create more realistic movements of your 3D objects.

Furthermore 2 new categories of 4DScript commands have been added: ADO and XML. Enterprise Dynamics fully supports these standards now and the result is a lot of new commands that you can use.

We have also added a scenario manager enabling you to run various simulation experiments automatically.

4DScript

1: A couple of new functions have been created to obtain the middle point of an atom: xMid, yMid, zMid, xAbsMid, yAbsMid, and zAbsMid.
2: The functions RemoveLayer and RemoveLayers now have a return value to indicate how much atoms are left on the removed layers. The function `RemoveLayer` also has an optional parameter to destroy the atoms when a certain layer is removed.
3: The function RotateCoords have received additional optional parameters to indicate a specific point over which you want to rotate.
4: The function Sleep has been added to pause the execution of Enterprise Dynamics for a specified number of milliseconds.
5: Enterprise Dynamics now has 2 new commands to execute loops: For and While.
6: The function DistanceToCamera has been added to obtain the distance between an atom and a camera.
7: Use the function AddOnAvailable to detect if a certain add-on for Enterprise Dynamics is licensed.
8: The Round function now has an additional optional parameter with which you can wrap a rounded value.
9: The StandardDisplay function now accepts an additional parameter to set the background color of the text.
10: Functions diText and DrawText now accept ColorTransparent as a background color.
11: The functions Min and Max can now be used with more than 2 parameters.
12: The Version function has been expanded to be able to give more version information regarding atoms or Enterprise Dynamics itself.
13: The function AddLayer now contains an additional parameter with which you can set the drawing order of the layers.
14: SetCell now contains an additional optional parameter with which you can force the way a new value is stored.
15: The functions Debug, Assert, and DebugTrace have been added to allow you to insert messages and traces during the time you are creating a simulation model. After switching the debug mode off Enterprise Dynamics will no longer display these messages and have a higher simulation speed.
16: 22 XML 4DScript commands allow full XML compatibility and data axchange. Find the complete list in the XML Category. Also, a pdf is included with the software to give you a

quickstart in using XML. (Quickstart guide to XML.pdf located in the help directory)

17: 16 4DScript commands have been added to support ADO compatibility and data axchange. Find the complete list in the ADO Category. Also, a pdf is included with the software to give you a quickstart in using ADO. (Quickstart guide to ADO.pdf located in the help directory)

18: New functionality added to retrieve a selected treenode in a GUI treeview: GuiTreeNodeSelected.

Engine

1: It is now possible to switch to an absolute coordinate system for the `On2DDraw` and `On3DDraw` event handlers. You can use this feature with the 4DScript function BaseCoords.

2: The Dim function is now recognized immediately in an event handler by the engine. It is no longer needed to register a variable first before you can use it in your event handlers.

3: The Atom Editor now has a new tab sheet called Functions. This tab sheet allows you to define functions on an atom.

4: In the Preferences window it is now possible to invert the behavior of the mouse when you want to rotate in a 3D window.

5: Enterprise Dynamics is capable of working with individual meshes to visualize 3D objects. The following functions are added to support this new feature: DrawModel3DMesh, MeshByName, MeshName, MeshCount, SetMaterialOverride, MaterialOverride.

6: It is now possible to draw a colored cube in 3D with the function DrawColoredCube.

7: It is now possible to obtain and set the icons, model, textures, sounds, and 3D models default directories with IconsDir, SetIconsDir, Model3DDir, SetModel3DDir, SoundsDir, SetSoundsDir, TexturesDir, SetTexturesDir, and ModDir.

8: The Erlang function contained a bug when used with some specific parameters. This has been fixed.

9: The status pie did not give the proper statuses. This has been fixed.

10: Models are now saved with a parameter indicating which library was used for the model. As a result it is now possible to start models by double-click the model name in the explorer.

11: Models can now be saved in binary format. See FileOpen for details.

12: It is now possible to have multiple table windows open at the same time. To do that we had to change the functions TableWindow and EditTable.

13: The function DestroyEventsOfAtom now allows you to delete the events based on the involved atom.

14: A complete new Scenario Manager has been added to the software. It is located in the Enterprise Dynamics root directory and named ScenarioManager.exe. It allows you to control E.D. externally to run several scenario's and experiments.

15: A Large 3D object Library has been included with the software: With standard 3D models, users create impressive visualization of their models in seconds. A separate helpfile

displays the new objects.

Atoms

1: The status of the Portal Crane was not reset to `Idle` when the crane was standing still. This has been corrected.
2: The Time Schedule Availability atom did not reset correctly. Due to this error some models simply would not run. This has been corrected.
3: The user interface for all atoms has been standardized. This increases the user friendliness which results in faster model building and a shorter learning curve. It will also present a good basis for developer users to use these (open source) GUI's.
4: Advanced Transporter now includes battery functionality. It is now possible to configure power consumption and a minimum battery level when charging needs to be done at a Battery Charging Station. Also acceleration and deceleration at corners (angle can be defined).
5: New set of advanced conveyors. These new conveyors have sensors that can be placed freely along the conveyor. The advanced conveyors have delay times and can start and stop depending on predecessors. The new set of conveyors include Advanced Accumulating Conveyor Straight, Advanced Non Accumulating Conveyor Straight and Advanced Non Accumulating Conveyor Curved.

Help

1: The functions TravelTo and MovingTo did not contain a link to the function TravelEventCode.
2: Due to some new features of Enterprise Dynamics the help of the Atom Editor needed to be updated. Follow the help jump to get a quick view of the changes.
3: Due to some new features of Enterprise Dynamics the help of the Preferences window needed to be updated. Follow the help jump to get a quick view of the changes.
4: We found out that some of the constants that are used in Enterprise Dynamics were not documented. This help has been added.

License

1. To accommodate the various wishes of our users and potential customers Enterprise Dynamics is now available in 3 versions:

   - Economy
   - Studio
   - Falcon

   Visit our website for product details.