ENTERPRISE DYNAMICS® 10 WHAT'S NEW

Create impressive simulations of processes and systems in industry, logistics and transportation at record speed and even more comfortable now with Enterprise Dynamics® 10.

INCONTROL is proud to announce Enterprise Dynamics® 10.

Look forward to a significant performance-increase and enhancements in visualization & usability.

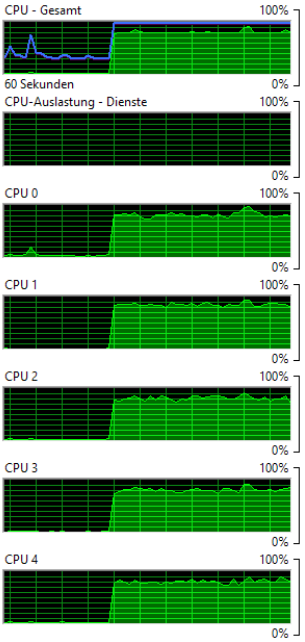
A full Enterprise Dynamics® 10 features' list can also be found in the Enterprise Dynamics® help system.

In case of any questions, please feel free to contact us – we will be happy to assist you!

NEW FEATURES

- 64-bit version
- Multi-threading
- New debugger
- Unicode support
- dbExpress support
- Data containers
- Re-organized event handling system
- Extended 3D model support
- Extended CAD support
- Adjusted naming and calling of attributes
- Commenting code has become more comfortable
- Improved code completion
- Improved error messaging
- Skyboxes
- and many more...

Enterprise Dynamics®
Logistic Simulation Software



PERFORMANCE

64-bit version
The addressing data room has been enlarged, so that even larger models can be handled now.

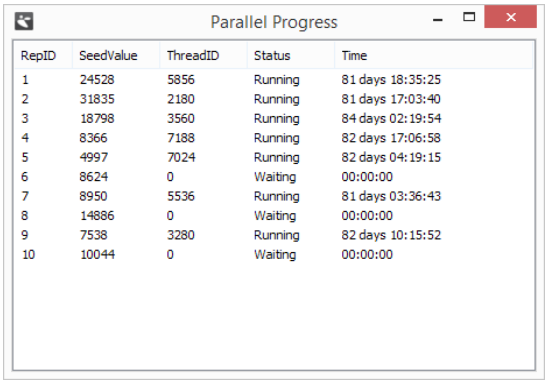
Event handling
The performance is significantly improved through re-organized event handling.

The internal eventlist scheduling/administration has been re-written for higher performance. The event lists are now stored in a different data structure, improving the performance of inserting and deleting events. Instead of one main list, each atom now contains its own event list and only the first event is in the main list. This highly improves the performance of functions like DestroyEventsOfAtom and DelayEvent.

Memory pool
An internal memory pool has been added to re-use objects atoms. This results in better performance, as memory can be re-used.

Multithreading
The simultaneous use of multiple cores on a multi-processor system allows a huge performance increase because the computational load can be distributed to multiple processors.

Loading speed application
Libraries and atoms are now loaded faster due to a re-implemented pre-register function algorithm and the use of different internal data structures.



RepID	SeedValue	ThreadID	Status	Time
1	24528	5856	Running	81 days 18:35:25
2	31835	2180	Running	81 days 17:03:40
3	18798	3560	Running	84 days 02:19:54
4	8366	7188	Running	82 days 17:06:58
5	4997	7024	Running	82 days 04:19:15
6	8624	0	Waiting	00:00:00
7	8950	5536	Running	81 days 03:36:43
8	14886	0	Waiting	00:00:00
9	7538	3280	Running	82 days 10:15:52
10	10044	0	Waiting	00:00:00

USER INTERFACE AND EXPERIENCE

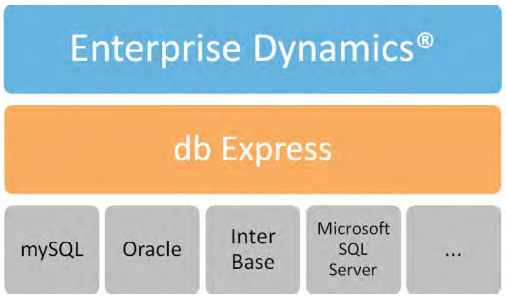
Improved tables
Sorting and mouse range select has been added to all table forms (atom editor, editable and GUI table).

Non modal function editors
Multiple instances of the function editor can be opened at the same time (no longer a modal window).

Zoom-to-mouse-position
Scrolling the mouse wheel in a 2D-visualization window now zooms to the position of the mouse cursor. This makes it much easier to navigate through the model and to connect channels.

INTERFACES

dbExpress
Embarcadero's dbExpress is a Unicode-capable database interface for a variety of systems. Its unidirectional access allows data exchange with very high performance.



MISCELLANEOUS

StringMatchesMask function
This new function checks whether a string contains a search string using a mask filter.

New table functions
TableInsertStringSorted, TableInsertValueSorted, TableSortColumn, TableSwapRows

VISUALIZATION

Extended 3D model support

Enterprise Dynamics® 10 comes with a widely extended 3D model support to make it even easier for the user to handle various objects, scenes, textures, building structures etc.

Newly added 3D formats include:

- Collada (.dae)
- Blender 3D (.blend)
- IFC/Step (.ifc)
- LightWave (.lwo)
- 3DS Max (.3ds)
- Wavefront object (.obj)
- and many more...

Additionally, several texture options are supported within the 3D models (Diffuse, 2nd Diffuse for blending, Opacity, Ambient, Emissive, Specular, Shininess, Normals, Height map, LightMap, and Displacement map).

For a complete list of all supported common interchange file formats we refer to the RegisterModel3D-help description within the Enterprise Dynamics® help system.

Skyboxes

To enhance the simulation and user experience, as well as to enable the user to easier convey dimensions to unfamiliar team-members or clients, we made a common technique available in Enterprise Dynamics® 10: Skyboxes.

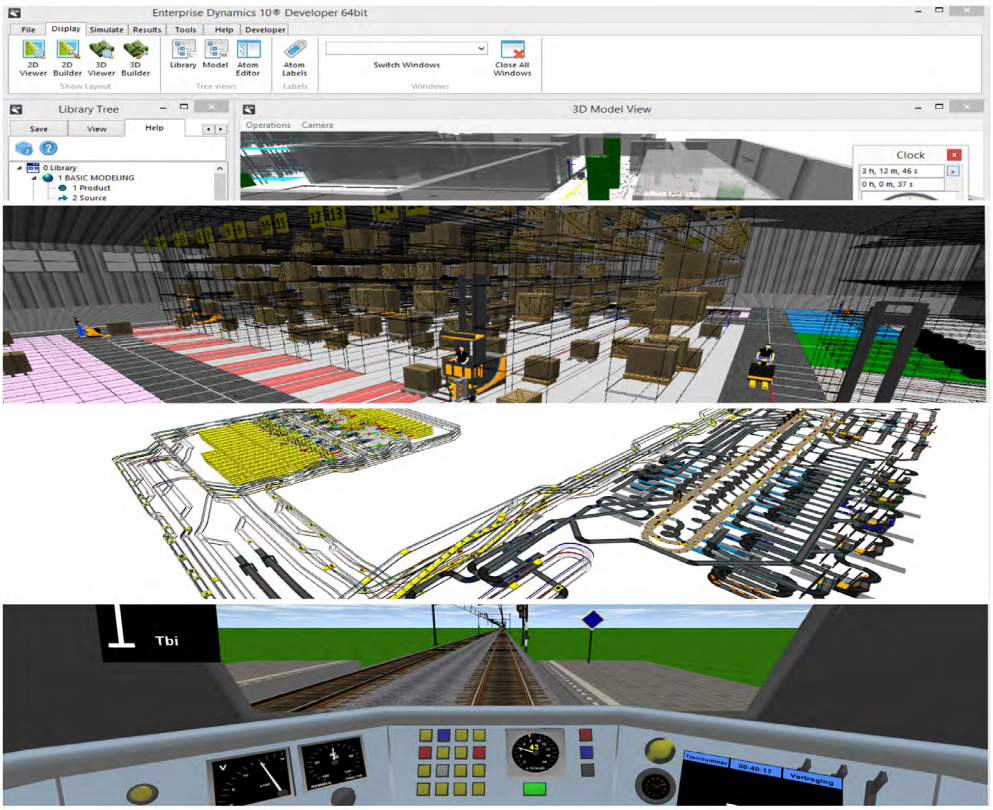
A skybox provides seamless textures of skies, landscapes, skyscrapers, buildings etc. or a combination of these to display a virtual 360° view and add an impressive content to a simulation scene. Many examples of skyboxes can be found on the internet.

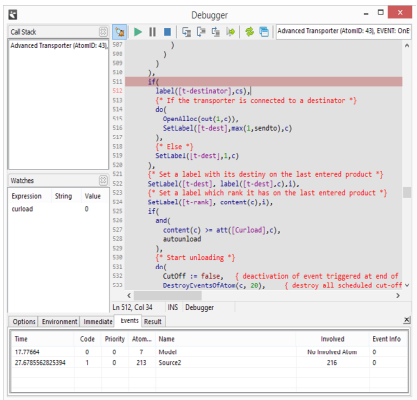
Extended CAD support

Enterprise Dynamics® 10 now supports the import of AutoCAD 2015 drawings. A set of new 4DScript functions has been added to loop through a CAD drawing obtaining information about its entities.

Static visualization

Support for static visualization primitives has been added to allow development of high performance 2D and 3D visualizations.





4DSCRIPT EDITOR

New debugger

With Enterprise Dynamics® 10 we also present a re-implemented debugger for even better user assistance.

The new debugger makes use of the integrated stack trace (also switch to a different stack level) and shows a watch list as well as a local variable list. Also, the step-over-functionality has been improved to now automatically step into flow control functions (if, do, repeat, etc.) and we added the functions step-outside and run-until-cursor.

Improved error messaging

With Enterprise Dynamics® 10 we improved the error messaging by making the 4DScript interpreter stricter; errors that previously were detected during runtime are now already detected during compilation. This means, the user is now informed earlier about when and where in the code it could possibly come to an error.

In addition, more information about the error-location (function, event, line number, and column number) is shown and an optional stack trace of the error is provided.

Line numbers

For progressing enhanced usability, line numbers have been added to the 4DScript application windows.

Improved code completion

The code completion now also lists local variables (incl. their type and current value), data containers and their corresponding functions as well as attributes and their corresponding functions. Type and number of parameters are displayed for all functions. By pressing the TAB key, only the 4DScript commands that have the first few characters in common with the entered code/text are shown now in order to make the code completion even more convenient and faster for the user.

Code highlighting

It is now more comfortable to get an overview of the occurrence of code-pieces. By selecting a piece of code, all similar text-pieces are now highlighted in the current 4DScript code window.

4DSCRIPT LANGUAGE

Attribute calling

By adding a new method to 4DScript to get and set attributes of an atom (AtomName.AttName) we increased the performance at the same time. This new method maps attributes during compilation instead of runtime.
Another advantage is that errors are automatically shown when the name of the attribute is changed and that the attribute names are shown in the code completion which prevents typing errors.

Data containers

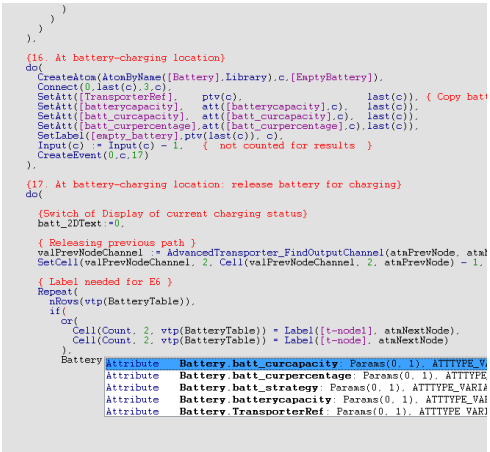
Next to tables, any number of data containers can now be saved in simulation objects. This offers access with high performance. Three types of data containers are currently available (Vector, MultiVector and Hashmap), each having a number of 4DScript functions to manipulate or access the contents. One atom can contain multiple data containers.

Nested commenting

Nested commenting is now supported.

Unicode support

Unicode is an international standard. The Unicode support simplifies the immediate display of different coding.

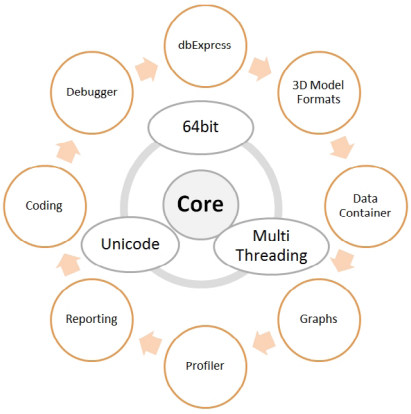


DEVELOPMENTS

Using our in-house expertise from numerous simulation projects we ensure the ongoing development and supply of high quality software products.

Our latest innovations, enhancements and developments have flowed into the release of Enterprise Dynamics® 10. In addition to a significant increase in performance, we have focused on visualization & usability topics.

A detailed features' list can also be found in the Enterprise Dynamics® 10 help system.



OPERATING SYSTEM

To run Enterprise Dynamics® 10, a Microsoft Windows operating system is needed.
Enterprise Dynamics® 10 is proven compatible with:

- Microsoft Windows 10
- Microsoft Windows 8
- Microsoft Windows 7
- Microsoft Windows Vista

Enterprise Dynamics® 10 is offered as a 32-bit as well as a 64-bit version.

SYSTEM REQUIREMENTS

	Minimum	Recommended
Processor	Intel 1.5 GHz Dual Core	Intel 3.0+ GHz quad+ core
Internal Memory	500MB	8Gb+
Hard Disk Space	400MB freier Speicher	2GB+
Operating System	Windows Vista	Windows 10
Video Card	OpenGL® 4.0	OpenGL® 4.5

CONTACT

If you have any questions about or suggestions for Enterprise Dynamics® in general or the latest version 10 in particular, we look forward to hearing from you.

You can reach us any time by phone or email, or visit the contact section of our website www.incontrolsim.com.

INCONTROL
Simulation Solutions

The new features and improvements of Enterprise Dynamics® 10 simulation software will facilitate your work!

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