Enterprise Dynamics Release Notes

Enterprise Dynamics 10.2

Written by:	INCONTROL Simulation Solutions
	Papendorpseweg 77
	3528 BJ Utrecht
	The Netherlands
	www.incontrolsim.com
Date:	20-6-2018 14:45
Version:	10.2

INCONTROL
Simulation Software®

Release Notes 10.2

Below are all the issues handled during the development of Enterprise Dynamics 10.2. We have listed them in several categories and you can find details of all these issues in our online support tracking system.

Visit the support section on support.incontrolsim.com to login in to INCONTROL JIRA.

For all Enterprise Dynamics users, the Enterprise Dynamics Community is the location to exchange thoughts, ideas and technical information. Everyone can become a member of our ever-growing community. You can visit the community at community.incontrolsim.com.

We always try to keep our software compatible with models created in earlier versions. We now have made improvements that could could cause errors when you open a model created in an earlier version. We have listed the possible causes for these errors and their solution here.

> ⚠ **Attributes Definitions and Usage**
> In Enterprise Dynamics 10.2 attribute definition and usage has become more strict. In previous versions, referring to a non-existing attribute could work without receiving an error message and the call to this (non existing) attribute simply would return '0'.
>
> In Enterprise Dynamics 10.2 calling a non existing attribute will result in an error message. As a consequence atom expressions referencing an attribute that has not been defined (yet) will also result in an error message (even during loadtime).
>
> To ensure that older models will still run correctly, after loading the model for the first time you have to take the following steps:
>
> 1. Open the model (or atom)
> 2. After loading, open the Atom Editor, select the atom with the attribute error messages, and open the **Attributes tab sheet ('Atom Editor Attributes Sheet' in the on-line documentation)**
> 3. For each attribute that has presented errors, correct the errors by adding an '=' in front of the expression and set the attribute type to vbScript
> 4. Save the atom and/or model
>
> The next time the atom is loaded, the **attributes ('Atom Attributes' in the on-line documentation)** will be read correctly. We have now added a pre-register attribute name in the save-routine. This will ensure that the attribute names exist during the evaluation of your expressions during loading.
>
> Please be aware that attributes could be missing completely. You can either correct the code, add the attribute or check if an attribute exists using the 4DScript **AttExists (on-line documentation)**.

> ⚠ **User Event Atom**
> When a model, developed in earlier versions of Enterprise Dynamics, contains an **User Event Atom ('User Events' in the on-line documentation)**, the name of the user events is loaded incorrectly due to changes to the atom as well as bug fixes. It will load the 4DScript code of the user event as the name of the user event.
>
> Internally this name of the user event is used to set an attribute. This will lead to errors if the 4DScript code contains spaces, brackets, etc.
>
> The best way to solve this issue and also to remove other older code, is to add a new User Event Atom to your model and copy every user event one-by-one to the new atom. After you have copied all user events to the new User Event Atom, delete the old atom and save your model.

> ⚠ **Function Editor Atom**
> The **Function Editor Atom ('Function Editor' in the on-line documentation)** now uses Definefunction instead of RegisterFunction to create its functions.
>
> When a model, developed in earlier versions of Enterprise Dynamics, contains a Function Editor Atom with functions in it, these function are registered in the OnInit event handler of the function editor.
>
> When the Gui/user-interface of the atom is opened, the atom is upgraded to the latest version. As a result of this upgrade the OnInit code of the Function Editor is removed. This means that **if you have added code to the OnInit Event of the Function Editor you first need to copy your code and place it again in the OnInit after the atom is upgraded.**

New Feature

- [ED-467] - Possibility to use a different random generator, for example the Mersenne Twister.
- [ED-856] - 2D Transparency
- [ED-992] - Add BIM support
- [ED-994] - Add support for Skeletal animation
- [ED-1022] - Open specific page of resource manager
- [ED-1025] - Support for Xbox one controller
- [ED-1044] - New functions GuiChart save functions
- [ED-1070] - Automated generation of technical documentation from library code
- [ED-1084] - New 4DS data types and type declaring of function parameters
- [ED-1086] - Update attribute and datacontainer info for derived atoms
- [ED-1100] - License expiration warning
- [ED-1165] - Add 4DScript commands to read out the dimensions of 3d models
- [APP-351] - Cut-Off time for Assembler
- [APP-444] - Input strategy for reservoir
- [APP-453] - Make it possible to display the data of the Generic Monitor atom in the Graph window by right clicking the atom.
- [APP-476] - Edit attributes of multiple atoms
- [APP-477] - Wrap a GUI around the Profiler
- [APP-553] - Oculus support
- [APP-556] - Make it possible to set default colors for the statuses of the monitors

Bug

- [ED-974] - Using help after running parallel replications causes ED to freeze
- [ED-1082] - Turkish 'i' not handled correctly in Unicode case conversion
- [ED-1108] - Updating of table results (momentarily) in strange headers.
- [ED-1121] - Defined functions on the Model atom are lost by saving the model
- [ED-1123] - Command line handling of parameter 2 fails
- [ED-1127] - ADO cannot read comma value
- [ED-1128] - Debugger gets into infinity loop when adding watches
- [ED-1131] - AtomByName has become slower.
- [ED-1133] - Content of inherited attributes is not overriden properly
- [ED-1134] - CameraPosition, CameraDirection produce access violation in 64bit
- [ED-1136] - Closing the help window via Windows Task Bar closes ED completely without warning
- [ED-1139] - Preregistering MultiVectors seems to go wrong
- [ED-1140] - Passing atom references to functions seems to go wrong
- [ED-1141] - Creation of some ChartSeries impossible with GuiChart_SeriesAdd
- [ED-1142] - Using "Restore(2D3D)" on a minimized model layout (2D & 3D) results in a gray, unavailable non working 2D/3D engine.
- [ED-1144] - AbsRotationAs seems not to work
- [ED-1146] - The average and standard deviation in the report preview are always zero instead of showing the correct values
- [ED-1148] - 2D3D is not referring to the last active animation window
- [ED-1150] - TextAtt is not settable and SetTextAtt also is not working
- [ED-1151] - The Help of the MoveAtom is not clear
- [ED-1155] - Sort functions in atom editor on: name, category, min, max and description no longer available.
- [ED-1158] - After changing the name of a GUI object, it is not directly available under that name.
- [ED-1159] - Gui component Icon behaves different then other Gui components
- [ED-1161] - When resizing the "Code area" in the function editor, the User information is not scaling.
- [ED-1162] - GUI component SmartEdit has no Events
- [ED-1164] - Parts of 4ds code is interpreted incorrectly when loading FRISO library

- [ED-1167] - Setting the GUIComponent ScriptEdit to "enabled = false", shows no gray out.
- [ED-1168] - SetPolygonStipple and DrawStatic3D don't work together
- [ED-1169] - The GUI control "label" rescales the moment the caption changes
- [ED-1172] - A lot of vr functionality is no longer available (vrIcon, vrSound).
- [ED-1174] - Error when loading City GML file in the resource manager
- [ED-1176] - When entering new code in the Events (atom editor), this is not visible after pressing "Apply"
- [ED-1179] - Improper behaviour of attribute's TStringGrid component in atom editor
- [ED-1180] - 3D Visualization while using drawing command is incorrect
- [ED-1181] - 3D performance drops down drastically between ED 10.1.0.2641 and 10.2.0.2813
- [ED-1182] - ADOBuildConnectionString does not work
- [ED-1183] - Visualization of Virtual Reality is not working
- [ED-1185] - Trying to open 3D Builder window gives error and doesn't show up
- [ED-1187] - freeLibrary does not free unmanaged DLLs
- [ED-1191] - OpenGL engine creates 1282 (invalid operation) errors after changing back to legacy code (before OpenGL 4.0)
- [ED-1193] - Button "Treeatom in 2D" activates 3D model view instead of 2D model layout window
- [ED-1194] - SelectAtom does not return valid atom reference
- [ED-1195] - Using the Move (atom) option in Model Layout window causes an error
- [ED-1197] - Not possible to declare MultiVectors
- [ED-1201] - CAD import behaves different to previous ED versions
- [ED-1204] - Virtual Windows does not load application
- [ED-1205] - Round on .5 does not work correct
- [ED-1208] - Claim "Can not apply changes to "On3dDraw" since it is active" although all viewers are inactive.
- [ED-1209] - Clock is smaller then before, so it is no longer clear that you can change the Show Time and refresh rate.
- [APP-371] - Example model "Gui Examples.mod" does not work
- [APP-412] - Placement and rotation of products caused by CTU or CTL does not work properly
- [APP-430] - 4DScript 'Transport Height' of NAC Straight edit field does not remember 4DScript code
- [APP-438] - Wrong 3D visualization Advanced Non Accumulating Curved Conveyor
- [APP-531] - Advanced Transporter - Corner speed behaviour
- [APP-545] - Check if 4DScript command 'cs' is used in all atoms in a safe way
- [APP-555] - Help files need to be adjusted (old Tutorial Annexes folder)
- [APP-561] - User event requires re-writing
- [APP-567] - CreateModelLayout(animatom) is not showing content of selected CompositionContainer
- [APP-568] - When adding a new lbrx file, it is automatically loaded.
- [APP-575] - Empirical distribution atom does not work with the option "Return a String"
- [APP-577] - Moviecreator straight path gives problems
- [APP-579] - Use of label in stacker is not working
- [APP-580] - Option to have Advanced transporter to its parking position
- [APP-581] - Diverse example models don't display result atoms in 3D right
- [APP-583] - Restricted attribute handling has to be applied to library and example models
- [APP-586] - New model does not change modelname
- [APP-591] - Check if functionality of library is working correctly (Example models, user models etc.)
- [APP-595] - Function Editor does register function when Category does not exist
- [APP-599] - Gui opens on wrong screen
- [APP-600] - Arrivallist atom - GUI throws errors
- [APP-606] - Alter 3D not always working
- [LOG-293] - Report atom collects wrong information
- [LOG-309] - Parameters like p(1) in functions should not be used in attributes of atoms (Robots, ASRS)
- [LOG-326] - 3D visualization of Results atoms are not correct
- [LOG-328] - Network Controller function NetworkController_IdentifyNodes gives an error
- [LOG-331] - 3D visualization of several conveyors don't work without the 2D draw handler being

executed

- [LOG-332] - Corner Transfer Lifter - functions CTL_Input/Output_Atom_Get_Rotation can cause errors
- [LOG-333] - Corner Transfer Unit - functions CTU_Input/Output_Atom_Get_Rotation can cause errors

Improvement

- [ED-406] - Runcontrol random generators settings improvement
- [ED-889] - StaticModel3D
- [ED-918] - Add support for Oculus Rift v2
- [ED-919] - Upgrade to Codemeter 6
- [ED-940] - Support static visualization with old OpenGL versions.
- [ED-973] - Save model in ED9 compatibility mode
- [ED-987] - Create a single installer for all producttypes
- [ED-1034] - Add transactions to DBExpress interface
- [ED-1041] - Smart Edit box has no "behaviour"
- [ED-1056] - Map old drawing functions to new static implementation
- [ED-1059] - Upgrade Assimp to latest version
- [ED-1060] - Upgrade FreeImage to latest version
- [ED-1078] - Don't allow special characters in atom names
- [ED-1112] - Changes on properties of the TeeChart component get lost when closing the Graph
- [ED-1113] - Write attribute names instead of indices in atom and model files
- [ED-1115] - Show error when invalid attribute names or indices are used
- [ED-1116] - Register function, atom name, or attribute renames
- [ED-1117] - 4DScript editor only for expression attributes
- [ED-1118] - Improved transparency drawing in 3D
- [ED-1122] - 4DScript Sqrt with negetive parameter does not throw errror
- [ED-1126] - Allow Coordinates System manipulation outside Draw event
- [ED-1129] - Model3DNode_Visible implementation as Resource Manager
- [ED-1138] - Why not use Ctrl F for searching?
- [ED-1145] - Add scroll bars to the summary report
- [ED-1147] - Support "Pan and Drag" in SetPreference
- [ED-1156] - Allow SetLineStipple to be used on single drawing command
- [ED-1177] - Limit the number of error messages
- [ED-1184] - New 4DScript functions GetSystemFont and FontExists
- [ED-1210] - LabelNameByIndex with a 0 or -1 gives an access violation.
- [ED-1211] - Combo box setting DataType in function editor is not always working and help is not clear what to expect
- [ED-1212] - When I change an attribute name on the mother, the children are not updated
- [ED-1213] - Editing attributes with F2 is not working smoothly
- [ED-1214] - Updating attributes is not updating children
- [ED-1215] - Would it be possible to paste values in the Run Control?
- [APP-193] - Functions 'averagecontent' and 'averagestaytime' are not listed in the ED Help (F1)
- [APP-296] - Upgrade tutorials to ED8.2
- [APP-367] - Move the Save treeatom, Save Treeatom as and Edit attribute to the Atom editor.
- [APP-418] - Corner Transfer Unit: GUI Arrangements to place without movement
- [APP-439] - Custom 3D visualization option for all standard atoms
- [APP-441] - The Carousel server has fixed output locations
- [APP-474] - The search of an atom in the 2D model layout doesn't present much help...
- [APP-507] - attach more Media data to ED 10 (in a separate package)
- [APP-511] - Moving the german example models from the installer to a separate package
- [APP-516] - New database connection atom using DBExpress
- [APP-518] - Library and Model buttons in the display ribbon
- [APP-519] - Different location for Atom Editor button in the display ribbon
- [APP-541] - Keep track of distance as standard indicator for the Advanced transporter or Human

resource.

- [APP-550] - Create a user friendly interface for the arrival list atom.
- [APP-552] - Clock invisible after switching to single monitor
- [LOG-303] - Adjust On2DDraw and On3DDraw for static visualization on all atoms of the logistics library

Tasks

- [APP-587] - Create a Profiler atom
- [ED-1075] - Update OPC package
- [ED-1175] - Coverpage for Tutorials, Quickstart and Guides
- [ED-1189] - DisplayFunctionEditor function
- [APP-521] - Update Teaching materials
- [LOG-320] - ED-1115 might impact some atom in the logistics suite
- [LOG-321] - Check library for changed behaviour regarding linked issue