PTV Vissim & Viswalk 7
Release Notes

Last modified: 2014-11-26

7.00-05 [51206]

2014-11-26

⊕ New Features and Changes

API

⊕ The EmissionModel.DLL interface is available again. For each vehicle type, an external DLL file can be assigned. Emissions calculated by this DLL (from the vehicle type, speed, acceleration and gradient passed from Vissim to the DLL) can be collected in the vehicle record, in the link segment evaluation and in the network performance evaluation. (There is no EmissionModel.DLL with a real emission model available from PTV. The DLL provided with the API module returns only test values.) **(6553)**

COM Interface

⊕ New methods Vissim.SuspendUpdateGUI() and Vissim.ResumeUpdateGUI() which stop respectively allow the updating of the complete Vissim workspace (network editor, list, chart and signal time table windows). Suspending the GUI update can save a lot of time during the execution of a COM script (if any windows are open) because otherwise each modification of an attribute of a static network object causes a complete redraw of the network and an update of these windows (even if the quick mode is active). **(8959)**

⊕ New read-only string value attributes of IVissim:
WindowTitle contains the full program name and version number as shown in the header of the Vissim window (e.g. "PTV Vissim (x64) 7.00-05").
ApplicationName contains only the program name (e.g. "PTV Viswalk"), without edition and version number.
VersionNumber contains a 6-digit version number, two digits each for main version, decimals and service pack number (e.g. "070005"). **(9167)**

⊕ The attribute Vissim.Presentation.AttValue("RecordAVIs") switches the AVI recording on and off. The attribute Vissim.Graphics.AttValue("Quickmode") switches the quick mode on and off.
(Vissim.Graphics.CurrentNetworkWindow.AttValue("QuickMode") is still available, so old scripts using it still work.) **(9180)**

⊕ The new method Vissim.Net.Vehicles.GetByLocation(posX, posY, distDistr) returns a VehicleCollection containing a subset of all vehicles inside a certain distance from the world coordinates (posX / posY). That distance is the maximum distance of the distance distribution distDistr which is passed as third parameter. A distance distribution is a new network object which specifies a probability depending on a distance, in this case the probability of the vehicle being *not* included in the collection. The probability is zero at distance zero (exactly at the passed world coordinates) and increases to 1 at the maximum distance of the distribution, with the detailed form of the distribution defined as curve in the distribution dialog. This method can be used to model lost Car2X messages sent from certain world coordinates, with the probability of a lost message increasing with the distance from that location. **(6552)**

Data Model

⊕ The attribute DestinationPosition of IVehicleRouteManagedLanes has been renamed to DestPos (as for the other route types). COM Scripts with the old name can still be used. **(9215)**

Dynamic Assignment

⊕ If a connector is closed for all vehicle types (not necessarily for all vehicle classes), it is not considered at all for edges of the network graph. (Previously, edges including this connector were created in the graph and shown in list windows but not used for paths.) **(9237)**

Graphics

⊕ The option "Automatic Level Transparency" (default: on) in the 2D graphic parameters of the network editor allows to turn on/off transparency for drawing network objects on different levels (using descending transparency). If this option is not activated, network objects on all levels are drawn identically. **(9098)**

Program Start

⊕ Vissim/Viswalk can be started as a Windows service from session 0 now. This is necessary for running it on Windows HPC Server without a user session. **(9271)**

Vehicle Simulation

⊕ Parking lots with real parking spaces: A parking space is considered blocked only if there is a standing vehicle between the lane of the parking space and the next lane without parking spaces (or on that lane) in all directions where there is such a lane. This changes the behavior in situations with multiple lanes with parking spaces at the left side of the link in a network with right-side traffic respectively at the right side of the link in a network with left-side traffic and in situations with multiple adjacent lanes with parking spaces in the middle of a links, with a free lane without parking spaces each to the left and to the right side. **(9262)**

Viswalk

⊕ Pedestrian network performance evaluation: This new evaluation collects data in result attributes: number of active, departed and arrived pedestrians, average pedestrian density, speed, normalized speed and flow as well as travel time, average delay and number of stops. It can be activated in the evaluation configuration dialog. **(5549)**

✓ Fixed Bugs

ANM Import

✓ The node import for left-side traffic has been improved for nodes with standard geometry (for which Vissim generates connectors and selects their destination lanes automatically) if the destination link of a left turn connector has more lanes than arriving connector lanes. **(9212)**

COM Interface

✓ The method AddNewVehicleToPTLine() treats the passed desired speed correctly now in the current unit for speed (instead of treating it as meters per second). **(9234)**

Dialogs

✓ The signal control dialog doesn't crash anymore after a WTT file has been deleted from a controller of the type Siemens VA. **(9240)**

Lists

✓ Attributes representing a percentage are now shown as percentage value with a % sign by default. In the attribute selection dialog, the percentage sign can be removed by switching off "ShowUnits", and the format can be set to a simple number (0..1 representing 0%..100%) by selecting "Default" or to scientific notation ("Scientific"). Other numerical values without unit can be shown as percentage, too, by selecting the format "Percent". **(9208)**

Signal Control

✓ The updated version of the RBC controller DLL doesn't crash anymore at the end of a simulation run (causing a memory dump to be written to the harddisk which could take more than a minute) nor at the start of a simulation run. Memory leaks in the RBC DLLs have been fixed, too, and the 64-bit edition is much faster than before. (The crashes were observed mainly on Windows 8.1.) **(8717)**

Simulation

✓ If the user selects the "Stop" button in an error or warning message dialog during a multi-run, the complete multi-run is stopped (instead of immediately starting the next simulation run). **(9183)**

Vehicle Simulation

✓ A bus on a PT line which is removed from the network after having waited for a lane change from its first time step in the network doesn't cause a crash anymore. **(9226)**

✓ In very rare cases, a PT vehicle could come to a stop at a PT stop but never begin the dwell time. This bug has been fixed. **(9276)**

7.00-04 [50560]	**2014-10-30**

⊕ New Features and Changes

Graphics

⊕ A color scheme can be used for the display of nodes. **(8925)**

Lists

⊕ If a list is exported manually to a database a dialog pops up which allows to change the database connection and table name. **(8856)**

Network Editor

⊕ When a new parking lot with real parking spaces is created, the default value for the zone number is "empty" (no zone). **(9152)**

✓ Fixed Bugs

COM Interface

✓ A possible crash in the method vissim.Net.PriorityRules.SetMultiAttValues has been fixed. **(9165)**

✓ After a call of RunContinuous(), Vissim doesn't return control to the calling script/program anymore when the simulation is switched to single step mode in the GUI but only after the simulation run has finished or the simulation time has reached the attribute SimBreakAt of the object Simulation. **(9142)**

Charts

✓ Filtering for simulation runs and vehicle/pedestrian classes is now the same as in evaluation lists. Simulation runs with no data and vehicle/pedestrian classes which are not selected in the evaluation configuration are not shown in a chart's attribute selection. **(9144)**

✓ Setting the option 'for all' and 'synchronized' in a chart layout for the network object selection did not correctly synchronize the chart with the current selection during simulation with some network object types (e.g. vehicles). This problem has been fixed. **(8948)**

Dynamic Assignment

✓ Reading the path file at the start of a simulation run or explicitly through the (context) menu doesn't cause a crash anymore with an open and synchronized path list. **(9147)**

Graphics

✓ Background images with an invalid file path to a DWG/DXF image file made Vissim crash after a while. This problem has been fixed. **(9158)**

Lists

✓ The decimal separator set in the "Numbers" section of the Windows "Region" settings is used now independently of the current Windows language. (Previously, this did not work for some languages, including English.) **(9178)**

Network Editor

✓ No crash anymore upon Ctrl-C when only one vehicle input is selected. **(9185)**

✓ Splitting a link doesn't cause a recalculation of spline points anymore, so the link position and/or length of objects on this link isn't changed incorrectly anymore. **(9197)**

Presentation

✓ The simulation parameter "simulation speed" is used for the replay of an animation file even if no simulation has been run since the start of the program. **(9188)**

Signal Control

✓ For the green time optimization, the start and end time from the node evaluation are used. After the optimization, the simulation runs (and their result attributes) used for the optimization are deleted automatically. **(9111)**

✓ Simulation runs with RBC controllers don't cause unnecessary loss of RAM anymore. This prevents a crash with an error message like "System.OutOfMemoryException" in a multi-run simulation with multiple RBC controllers. **(9204)**

Simulation

- ✅ Continued inputs are handled correctly now. (Previously, the start times were generated for each time interval separately.) **(9057)**

Vehicle Simulation

- ✅ A public transport vehicle on a line with a loop (which visits PT stops multiple times) stops at a line stop only if it is active (and not during each pass anymore). **(9195)**

Viswalk

- ✅ If a pedestrian cannot be assigned to a valid area or ramp, the simulation does not crash anymore. Instead, the pedestrian is deleted and the user is notified. **(9115)**
- ✅ The simulation run is canceled after the error message stating that an input area is to small to create a pedestrian. (Previously, this message was shown repeatedly in each time step.) **(8978)**

Window Handling

- ✅ Windows in auto hide mode are saved correctly now in the layout file (*.layx) and can be read in again. **(9109)**

7.00-03 [49944]   2014-10-08

⊕ New Features and Changes

COM Interface

- ⊕ New example for basic COM commands in several programming languages (VBA, C++, C#, Matlab, Python) in the directory "Examples Training\COM\Basic Commands\". The introductory document "Vissim 7 - COM Intro.pdf" has been updated, too. **(9112)**

Data Model

- ⊕ Attributes of static 3D objects can be changed during a simulation run. **(9045)**

Dynamic Assignment

- ⊕ The assignment of vehicles to the existing paths can be specified by user-defined path volumes. For this purpose there is the new attribute "Path selection method" (in the dialog "Dynamic Assignment" on the tab page "Cost and path handling", in the COM interface Vissim.Net.DynamicAssignment.AttValue("PathSelMethod")). This attribute has the two possible values "Kirchhoff" (default value) and "Use old volumes". If "Kirchhoff" is selected, the assignment uses the Kirchhoff exponent and the expected general cost values of the paths (edge total). If "Use old volumes" is selected, the probability for a vehicle to select a specific path corresponds to the share of the value of the path attribute "Volume (old)" in the total "Volume (old)" of all paths of the same parking lot relation. These volumes (for all time intervals) are read from the path file only at the start of each simulation run and saved in the attribute "Volume (old)". (In the attribute "Volume (new)", the vehicles using the respective path are counted during the simulation run.) If the path selection for a time interval (which has not yet begun) is to be modified during (!) a simulation run, the attribute "Volume (old)" of the paths must be set. If the path selection is not be specified before (!) a simulation run, first the path file must be read, then the attribute "Volume (new)" of the paths must be set, and finally the path file must be written again (because only the values of the attribute "Volume (new)" is saved there). For reading and writing of the path file, there are two new menu items im the menu Traffic / Dynamic Assignment and new methods in the COM interface (Vissim.Net.Paths.ReadDynAssignPathFile respectively WriteDynAssignPathFile).
  The format of the path file doesn't have any effect anymore on the usage of the path volumes. Even with a path file created by ANM import, the path volumes are only used if the path selection method is set to "Use old volumes". The ANM import sets the path selection to "Use old volumes" automatically, however, if ANM routes are imported as paths for dynamic assignment. **(8957)**

Interfaces

- ⊕ The driving simulator DLL interface is available again. The functionality is identical with the interface of Vissim 5.40, except the parameter snapFileName of the function VISSIM_Connect() which is ignored as long as Vissim doesn't have the snapshot functionality. In Vissim, the interface can be activated and the vehicle type for the driving simulator vehicle(s) can be selected on the tab page "Vehicle Behavior" of the Network Settings dialog. **(7389)**

Viswalk

⊕ Pedestrian.PedestrianType can be changed during a simulation run, e.g. through the COM interface. **(7910)**

✅ Fixed Bugs

ANM Import

✅ Adaptive import doesn't cause all WTT file references of signal controllers to be duplicated anymore. **(9102)**

Charts

✅ Vissim does not crash anymore when a simulation run is deleted while a chart window with simulation run references is open. **(9108)**

Dynamic Assignment

✅ If the matrix file references zones which are not assigned to any parking lot and have non-zero demand, Vissim does not crash anymore. **(9106)**

Evaluations

✅ A signal head with the attribute "Discharge record active" set to true doesn't cause a crash anymore in a simulation run without activated discharge evaluation. **(9118)**

Graphics

✅ Storyboards: The camera speed of keyframe transitions with "Smooth start" or "Smooth end" does not change suddenly half way through the transition any more (the speed is now continuous). **(285)**

Lists

✅ Vissim does not crash anymore when a cell for color is currently selected in a list and the selection of the list is changed indirectly by duplicating, adding or through global selection. **(8930)**

Network Editor

✅ More specific wording in the message window regarding completion of routes and PT lines. **(9049)**

✅ Moving a link cannot cause the error message "Unextpected end of node x" anymore at the start of a simulation run. (Very short node segments at the start/end of a connector cannot be removed anymore, so the node/edge graph can still be created.) **(9056)**

✅ Signal heads are displayed during simulation according to their type as left or right pointing arrows. **(8564)**

Signal Control

✅ The updated SCATS controller DLL doesn't crash anymore at the start of a simulation run. **(9160)**

Vehicle Simulation

✅ If a vehicle determines that its selected parking space is blocked by a standing vehicle on the adjacent (drive-through) lane, the parking vehicle now cannot change its selection to a different (not blocked parking space) anymore as soon as the front end of the vehicle has arrived in the originally selected parking space. Previously, a permanent gridlock could be caused if the blocking vehicle could not pass the parking vehicle which had its rear end still on the other lane. **(9110)**

7.00-02 [49473]   2014-09-11

⊕ New Features and Changes

ANM Import

⊕ In multi-lane roundabouts, lane closures (attribute "blocked vehicle classes") are used now instead of lane change restrictions. **(8860)**

Data Model

⊕ Managed lanes routing decisions have a new attribute "Managed lanes data" which combines the information about the current travel time savings, average speed on the managed lane route and current toll for single occupancy vehicles. (This can be displayed as label of the routing decision as in Vissim 5.40.) **(7917)**

Graphics

⊕ The graphic parameter "Fill style" is used for areas and ramps even if a color scheme is active. **(9047)**

Network Editor

⊕ The position of the mouse pointer is used correctly even if network objects are copied/pasted with Ctrl-C and Ctrl-V. **(9017)**

✓ Fixed Bugs

ANM Import

✓ Adaptive import works now for networks with roundabouts. **(8944)**

✓ Repeated adaptive import works correctly now even if there is a projection listed in the *.anm file. (Previously, the whole Vissim network was discarded because incorrectly changes were detected for all nodes.) **(8995)**

Dynamic Assignment

✓ Changes of link attribute values which cannot affect the node-edges graph don't cause the graph to be discarded anymore. **(9079)**

✓ If no cost file is defined in the dynamic assignment dialog, Vissim creates it anyway with a default file name as for the path file. **(8891)**

✓ PTV Visum Assignment can be called again. (This did not work in Vissim 7.00-00 and 01.) **(9028)**

✓ Running a dynamic assignment simulation while the path list is open does not cause a crash anymore. **(8839)**

✓ The convergence evaluation now yields correct values for edge travel times in each time interval. (Previously, values were aggregated over all previous time intervals.) **(9074)**

Evaluations

✓ In the lane changes record, negative vehicle numbers (of internal vehicles, e.g. signal heads, priority rules, conflict areas) are listed correctly (without adding 2^32). **(8996)**

Graphics

✓ The default class limits for the classified display of link segments depending on density have the correct order of magnitude now. When a color is changed which has the ARGB value (0, 0, 0, 0) (transparent black), the color picker dialog is initialized correctly now. The default colors for relative delay (20-30) and volume (1500-2000) have been changed. **(8886)**

Lists

✓ Cells with exact volumes are colored yellow now in the main vehicle/pedestrian input list as well. **(9018)**

✓ The layout of an open list window is restored correctly after reading a layout file even if this file contains a layout for a list window of that type. **(8907)**

Signal Control

✓ The *.wtt file name is set automatically to trend429.wtt and the program file name to trend429.exe for the controller type TRENDS when a new controller of such a type is created. **(8971)**

Simulation

✓ A simulation run with active 2D visualization was much slower than in Vissim 6. This bug has been fixed. **(9068)**

Test Mode

✓ PT telegrams are listed only once in macro files and are actually passed to all signal controllers. (Previously, they had been listed in each time step from their creation until the next signal controller time step but not passed to any controller when executing the macro.) **(8769)**

Vehicle Simulation

- The following bug has been fixed: If overtaking on the same lane is activated in the driving behavior, a vehicle following a vehicle of a type which may not be overtaken can move laterally during, trying to pass that slower vehicle, but aborts each single attempt. **(8997)**
- Vehicles are not stopped permanently anymore by a stop sign directly downstream of a conflict area. **(8414)**

Viswalk

- The walking behavior parameter lambda is limited correctly to the range 0 to 1 now. **(8981)**

7.00-01 [49106]   2014-08-19

⊕ New Features and Changes

Data Model

- ⊕ If a public transport stop gets a waiting area or a platform edge assigned, a default entry in the boarding passenger list of the stop is created if that list was empty before. **(8019)**

Dialogs

- ⊕ In the dialog "Connector", the option "Show aggregated values" on the tab page "Display" has been renamed to "Show classified values". (The functionality has not changed.) **(8890)**

Network Editor

- ⊕ When a public transport stop is moved to a lay-by stop (through the context menu), the created links are excluded from use by vehicles without a route or by dynamic assignment: The entry connector is closed for all vehicle classes and its desired direction is set to "right". **(8819)**

Signal Control

- ⊕ WTT files can be assigned to VS-PLUS controllers in the dialog "Signal Control" on the tab page "Controller (VSP)". **(202)**

Viswalk

- ⊕ If the license doesn't contain vehicle simulation, there are no vehicle related network objects anymore in the "empty" default network in the file defaults.inpx (which is now located in the subdirectory Viswalk 7 instead of Vissim 7). **(8168)**
- ⊕ The signal head attribute "compliance rate" affects pedestrians now as well, so they can ignore red traffic lights with a defined probability. **(8078)**

⊘ Fixed Bugs

ANM Import

- A bug during the first adaptive import of a network with a projection caused subsequent adaptive imports to fail with the message "Projection settings of ANM files differ.". This bug has been fixed. **(8935)**
- Bypasses at roundabouts don't cause the import to fail anymore. **(8899)**
- The import doesn't fail anymore if the total of the length of a triangular island and the pocket length is almost the same as the length of a different pocket. (This could be caused by rounding imprecision in networks with Imperial units.) **(8351)**
- The import of a roundabout doesn't fail anymore with a message like "Link 15 cannot be inserted: there must be at least 1 items in the lanes container." (This could happen if there was a bypass with all entry lanes being pockets.) **(8929)**
- The import of networks with roundabouts doesn't fail anymore if the lane turns in the roundabout have no destination lane index. (Such networks are created by Visum if a standard geometry is exported and the option "Use lane definition" is activated in the node.) **(8895)**

Charts

- If a chart window displays a result attribute for a specific time interval when this time interval is deleted (because the interval length is changed in the evaluation configuration), there is no crash anymore. **(8990)**

Dynamic Assignment

- Changing the simulation or evaluation period now invalidates the dynamic assignment graph in order to avoid a crash. **(8952)**
- For the creation of static routing, vehicle composition elements with relative flow smaller than 0.001 out of a total of 1.0 (i.e. smaller than 0.1%) are ignored now. (Previously, the creation of static routing failed in this situation.) **(8804)**
- Vissim does not show a warning message anymore when the user opens the path list in an empty network. **(8892)**

Evaluations

- If the option "Overwrite all previous results" is selected in the evaluation configuration, the simulation run number is now reset to 1 again before the first run of a multi-run simulation. (This did not happen in version 6.00-18 and 7.00-00. Since 6.00-18, however, the results of each simulation run are deleted at the start of the next simulation run even during a multi-run.) **(8866)**
- Node evaluations include PT vehicles now (in result attributes and raw data) even if the distance from the start of the PT line to the node is smaller than the distance to the start of the delay measurement as defined in the evaluation configuration (default: 100 meters) and the node entry is on the start link of the PT line. **(8965)**

Graphics

- Color schemes work correctly now for vehicles and pedestrians even if Imperial units are selected. **(8988)**

Lists

- In certain situations with Auto-Pan/Auto-Zoom, list cells could be sporadically blacked out completely. This problem has been fixed. **(8882)**

Network Editor

- A node segment that spans not a complete link/connector is selected with priority over the link/connector when clicking on it. **(8821)**
- Inserting a background image from ECW files caused a crash on some ATI graphic cards (e.g. FirePro V3800) with the lastest drivers. This problem has been fixed. **(8725)**
- Labels of pedestrian inputs, routing decisions and travel time measurements as well as vehicle travel time measurements can be dragged without problems now. **(8791)**
- Occasional crashes after deleting lanes don't occur anymore. **(8983)**
- Occasionally, a DWG/DXF file could not be loaded during manual insertion of a background image (but networks already containing this background image could be loaded correctly). This problem has been fixed. **(8580)**
- On some systems ECW background images could not be loaded anymore. This problem has been fixed. **(8614)**

Signal Control

- The *.wtt file name (corresponding to the program file name) is set automatically for the controller types VS-PLUS and TRENDS when an *.inp file (from Vissim 5.40) is read. **(8826)**
- The function "Optimize Signal Control" works again now. **(8841)**
- VISSIG (stage oriented fixed time control): If the first time in a daily signal program didn't start at 00:00:00 (but e.g. at 00:10:00), the simulation crashed at that first time (e.g. after 600 simulation seconds). This bug has been fixed. **(8849)**
- VISSIG (stage oriented fixed time control): The change of the number of an interstage doesn't cause an exception message anymore. **(8846)**

Simulation

- The option "Automatically add new columns in lists" doesn't cause a crash anymore when the simulation is started with "Number of runs" larger than 1. **(8900)**

Viswalk

- If a pedestrian approaching a PT vehicle doesn't reach the vehicle before the departure and thus must walk back to a waiting area but there is no way back (e.g. because of an escalator), the simulation doesn't crash anymore. **(8840)**
- Pedestrians can walk on a stopped escalator (speed zero) now even if the bottom step is mostly below ground. **(8869)**

- ✅ Pedestrians with very high desired speeds in queues who leave the walkable ground and are thus removed from the network don't cause the simulation to crash anymore. **(8962)**