PTV Vissim & Viswalk 2023
Release Notes

PTV | **GROUP**

Last modified: 2024-06-10

2023.00-14   [280616]

2024-06-05

⊕ New Features and Changes

Vehicle Simulation

⊕ In specific situations, vehicles intending to change lanes to a specific destination lane now better avoid collisions with nearby vehicles that are also changing lanes to the same target lane. **(194619 ⚠)**

✅ Fixed Bugs

Evaluations

✅ A workaround has been implemented in the Bosch emissions calculation to bypass a temporary problem with the cloud connection. Too many vehicles can still lead to problems. **(233090)**

Graphics

✅ Several minor issues have been fixed when converting 3D models referencing legacy files to the new 3D models files delivered with Vissim. **(219531)**

Network Editor

✅ Meso network nodes can now be created automatically without errors within segment nodes, that are only used for evaluation or dynamic assignment. **(214519)**

Scenario Management

✅ Vissim no longer crashes in specific cases where warnings occurred while loading a scenario with evaluation results. **(207129)**

Vehicle Simulation

✅ The simulation no longer crashes in specific networks with parking lots that allow reversing in or out. **(228373)**

✅ Vehicles with right of way at a crossing conflict area will now yield instead of colliding with a conflicting vehicle, in case the conflicting vehicle is unable to stop before the conflict area. **(229637 ⚠)**

✅ Vehicles with right of way at a merging conflict area will now yield instead of colliding with a conflicting vehicle, in case the conflicting vehicle is unable to stop before the conflict area. **(221757 ⚠)**

⚠ Breaking Changes

Vehicle Simulation

⚠ Due to the changed lane change behavior when nearby vehicles are also changing lanes, simulation results can differ to those of previous versions. **(194619 ⊕)**

⚠ In network containing crossing conflict areas, simulation results can differ to those of previous versions. **(229637 ✅)**

⚠ In network containing merging conflict areas, simulation results can differ to those of previous versions. **(221757 ✅)**

2023.00-13   [274607]

2024-02-14

✅ Fixed Bugs

Installation

- ✅ Startup accelerated: The program startup has been accelerated slightly. **(215337)**

Signal Control

- ✅ RBC: Importing an *.rbc file with a scheduled pattern with number 8 or larger no longer causes the import to fail. Patterns with these numbers will be ignored, instead. **(198522)**

2023.00-12 [273399]   2024-01-23

⊕ New Features and Changes

Graphics

- ⊕ 3D models are now displayed in more detail at large distances and do not appear out of nowhere when zooming towards them. For recordings, 3D models are always displayed in full detail, regardless of the distance from the camera. **(157336)**

✅ Fixed Bugs

Meso Simulation

- ✅ Meso vehicles that chose a new path at a dynamic routing decision and cannot reach their next meso turn along the path because they are on the wrong meso lane leading to the node with the branch now cause a warning and will be deleted from the network instead of getting stuck on arbitrary turns or causing crashes. **(211045 🔴)**

Miscellaneous

- ✅ Https communication via proxy failed: In some cases, network access via https failed with the message 'Nschannel: next InitializeSecurityContext failed: Unknown error (0x80092012) - The revocation function was unable to check revocation for the certificate', mostly in connection with the use of a proxy. This error has been fixed. **(198743)**

Signal Control

- ✅ RBC: Since the new RBC controller does not support the 'OffsetReference' mode 'LagCoordGreen', this mode is now changed to 'LeadingStartOfGreen' automatically upon import, instead of yielding an unknown 'OffsetReference' mode. **(209416)**

Vehicle Simulation

- ✅ The interaction of vehicles at merging conflicts was improved to avoid vehicles crashing into each other in a rare scenario. **(207833 🔴)**

🔴 Breaking Changes

Meso Simulation

- 🔴 Simulation results in networks with simulation mode Meso and dyanmic routing decisions can differ to those of previous versions. **(211045 ✅)**

Vehicle Simulation

- 🔴 Simulation results may differ to those of previous versions in specific cases due to changed vehicle behavior at merging conflict areas. **(207833 ✅)**

2023.00-11 [268794]   2023-10-16

✅ Fixed Bugs

Dialogs

- ✅ The dialogs "Link" and "Generate Spline" are now properly displayed on high resolution displays with a large scaling factor. **(179578)**
- ✅ Vissim no longer crashes when creating, editing or deleting aliases in the quick access section of the attribute selection dialog. **(193876)**

Meso Simulation

- ✅ Vissim no longer crashes when PT vehicles exit a micro section without any pt line stops left. **(195116)**

Network Editor

- ✅ Multiresolution seamless image databases (MrSID, *.sid files) containing transparency information can now be displayed as background images. **(192820)**

Scenario Management

- ✅ Upon loading a scenario or loading modifications into a network, conflict areas are now properly updated. Simulating a scenario and simulating an exported scenario yield the same results now. **(188284 ❗)**

❗ Breaking Changes

Scenario Management

- ❗ The now correctly updated conflict areas after loading a scenario may cause simulation results of scenarios to differ to those of previous versions. **(188284 ✅)**

2023.00-10   [265577]   2023-08-21

✅ Fixed Bugs

File Handling

- ✅ Vissim is again able to import matrices exported by Visum. **(187291)**

Workspace

- ✅ Resolved an issue where Vissim would in rare situations hang or crash when reading a model transfer file. **(190085)**

2023.00-09   [262931]   2023-07-13

⊕ New Features and Changes

Installation

- ⊕ The CodeMeter Runtime deployed with PTV Vissim has been updated to CodeMeter 7.60b. **(159139 | 17948)**

Signal Control

- ⊕ RBC: The new controller now supports vehicle omits, i.e., the option to skip individual signal groups in a pattern. See the document "Vissim 2024 - What's new.pdf" for details. **(168132)**
- ⊕ RBC: The new controller now supports leading pedestrian intervals, also known as Delay Green. This option enables to turn the pedestrian signal group Green earlier than its corresponding vehicle group. See the document "Vissim 2024 - What's new.pdf" for details. **(160569)**

✅ Fixed Bugs

ANM Import

- ✅ The import now searches for *.sig files to be imported in the correct directory. **(179987)**

Data Model

- ✅ The attribute 'Animation Speed' of static 3D models is now saved in the *.inpx file. **(183033)**

Driving Simulator Interface

- ✅ Pedestrians that are controlled by the Driving Simulator Interface no longer cause crashes when they cross any green conflict marker of a priority rule. **(181987)**

Graphics

- ✅ Freeze due to Bing Maps access: When using Bing Maps as a background map, the user interface could freeze. This bug has been fixed. **(180536)**

Lists

- ✅ The content of lists is now displayed correctly after performing green time optimization of stage-based fixed time controllers. **(172775)**

OpenDRIVE Import

- ✅ Projection strings containing 'geoidgrids' will no longer prevent locating the network on the background map. **(177238)**

Signal Control

- ✅ RBC: When using coordinated transit priority, pedestrian signal groups without a call will not delay green for prioritized signal groups needlessly. **(174908 ⊘)**
- ✅ RBC: When using the Early/Extend feature in combination with barrier groups with only one ring group, the splits of signal groups are now shortened more reasonably. **(181711 ⊘)**

⊘ Breaking Changes

Signal Control

- ⊘ RBC: When using coordinated transit priority, simulation results can differ to those of previous versions. **(174908 ✅)**
- ⊘ RBC: When using the Early/Extend feature in combination with barrier groups with only one ring group, simulation results can differ to those of previous versions. **(181711 ✅)**

2023.00-08 [261369]

⊕ New Features and Changes

Installation

- ⊕ For the installation of Vissim in the background, the parameters IgnoreOutdatedVCRedists and IgnoreSSCRuntime were added. If these are set to '1' or 'true', some components are not installed. IgnoreOutdatedVCRedists suppresses the installation of older Microsoft Visual C++ redistributables, IgnoreSSCRuntime the installation of Microsoft SQL Server Compact. **(174680)**
- ⊕ If the switch IgnoreOutdatedVCRedists was used during the Vissim installation some graphic formats (shp, tga, jp2, sid) are not supported and cannot be displayed and a warning is shown. **(180904)**

✅ Fixed Bugs

COM Interface

- ✅ A resource leak in the function Vissim.LoadLayout could cause a crash, when the function was called many times, for example, in loops. This issue was fixed. The problem could, in principle, also occur when a lot of layout files were loaded interactively. **(180689)**

Network Editor

- ✅ When a parking lot, that has a reference to a zone, is copied together with its link (left click + ctrl + drag), a new zone is created and the parking lot now references the new zone. When the parking lot is copied without its link, no new zone is created. **(166164)**

Simulation

✅ A network check function was added that checks for overlapping platform edges with different queuing parameters. This could lead to undefined behavior of boarding pedestrians. **(180010)**

Vehicle Simulation

✅ Vissim crashed at the start of the simulation, when the checkbox 'Matrices' was checked in the parameters for dynamic assignment, but there existed no node, where 'Use for dynamic assignment' was set. This error was fixed. **(178205)**

2023.00-07 [260635]   **2023-06-03**

⊕ New Features and Changes

Signal Control

⊕ RBC: Legacy supply files (*.rbc) can now be imported by the RBC editor. **(172433)**

✅ Fixed Bugs

DriverModel.DLL Interface

✅ During simulations, the memory used by Vissim will not increase continuously anymore. **(158390 | 15765)**

✅ The correct error message is now displayed when setting DRIVER_DATA_WANTS_SUGGESTION and DRIVER_DATA_USE_INTERNAL_MODEL both to zero. **(178196)**

Driving Simulator Interface

✅ The coordinates of vehicles with the attribute 'turned' set to true are now correctly sent to the driving simulator. **(177045)**

Messaging

✅ Some previously untranslated messages are now correctly translated. **(176852)**

Signal Control

✅ RBC: *.prbc supply files can now be dragged and dropped into the RBC editor window to load the settings and set the signal controller's supply file. **(176171)**

Viswalk

✅ Fixed an issue in the BIM Import (*.ifc) where the import of geometries failed if they were defined by a clockwise-wound 'IfcPolyLoop' and an 'IfcFaceOuterBound' with the attribute 'Orientation' set to 'FALSE'. **(159158 | 17967)**

Workspace

✅ A progress dialog is now displayed when reading evaluation data, as this operation might take several minutes, depending on the amount of collected evaluation data. **(159143 | 17952)**

✅ The visibility and selectability of levels set in the 'Levels' sidebar does not change anymore when editing the 'Number' attribute of levels. **(172106)**

2023.00-06 [258684]   **2023-04-27**

⊕ New Features and Changes

Application Examples

- The new example 'Swing Bridge' demonstrates a bridge for pedestrians and cyclists which is temporarily closed and rotated for ships to pass. Signals stop the traffic and trigger the various states when barriers and the bridge move. The 3D animation is controlled by attribute modifications. The example is available at '\Examples Demo\Swing Bridge.ES' and includes a description PDF. **(173064)**

Signal Control

- RBC: The RBC editor now stores the visibility of expandable table columns in its settings. **(160563)**
- RBC: The Ring Barrier Controller now supports transit priority with extension-only operation as well as early green. Priority and recovery minimum green intervals can be configured for each vehicle signal group. Transit inputs can be configured either as presence or check-in/check-out detectors, with support for delay and extend times, calling point detection and stop-bar checkout mode.
  Also, the controller now supports preemption with up to 10 preempts, two track clearance intervals and presence as well as check-in/check-out preempt detection.
  Further preferential treatment features will be added based on customer requests. **(160789)**
- The signal controller DLL interface sends additional C2I (car to infrastructure) data for all approaching vehicles to each controller requesting that. The additional data contains the vehicle attributes 'Public transport line' and 'Partial PT routes'. **(159181 | 17991)**

Fixed Bugs

Messaging

- Crash when copying message texts: The program no longer crashes when copying a message text from the message window if the shortcut menu is opened on the message, but the message then disappears from the message window due to the occurrence of other messages before it is actually copied. **(157414 | 12254)**

Read Additionally

- Read Additionally of 2D/3D Models will not duplicate existing models anymore in specific cases. **(159060 | 17864)**

Scenario Management

- Comparison scenarios are again shown in the tree in the attribute selection dialog. **(159170 | 17979)**
- Starting a simulation with dynamic assignment and comparison scenarios will not cause a crash anymore. **(166336)**

Signal Control

- RBC: When converting signal controllers from type 'Ring Barrier Controller (old)' to 'Ring Barrier Controller', errors while reading old RBC supply files could cause the converted signal controller to have an empty supply, without showing an error message during conversion. This issue has been fixed. **(160560)**
- RBC: When converting signal controllers from type 'Ring Barrier Controller (old)' to 'Ring Barrier Controller', the pattern start times had not been adjusted to the simulation start time of day. For signal controllers of type 'Ring Barrier Controller (old)', pattern start times are expressed in time since simulation start. However, pattern start times are expressed as simulation time of day in signal controllers of type 'Ring Barrier Controller'. The pattern start times are now adjusted to the simulation start time of day during the conversion. **(171526)**
- RBC: When hiding rows containing only default or read-only values in the RBC editor, empty rows for vehicle SG parameters in the Coordination Priority and Free Running Priority tables were not correctly hidden. This issue has been fixed. **(160598)**
- The signal controller DLL interface for C2I (car to infrastructure) now correctly sends estimated times of arrival for a pt vehicle's next line stop, even if the pt vehicle is currently stopping at the previous line stop. **(174414)**

Vehicle Simulation

- Vehicles now better take into account curve speed when planning lane changes and overtaking maneuvers to prevent needless lane changes. **(159138 | 17947** ⛔**)**
- Vehicles with 3D information signs that are currently not located on a link will not cause a crash anymore. **(167463)**
- Vehicles with category 'Pedestrian' and car following model Wiedemann 74 or Wiedemann 99 will not stop needlessly when following a leading vehicle with category pedestrian that does not intend to stop. **(167791** ⛔**)**

Vissim Kernel

- Outputting Unicode characters to the console will not cause any remaining console output to be discarded anymore. **(159189 | 17999)**

Viswalk

- ✅ BIM Import (*.ifc) will not create a 3D model for unsupported versions of the imported file to prevent crashes. **(159074 | 17879)**

⛔ Breaking Changes

Vehicle Simulation

- ⛔ In networks containing vehicles of category 'Pedestrian' and car following model Wiedemann 74 or Wiedemann 99, simulation
results can differ to those of previous versions. **(167791 ✅)**
- ⛔ In networks using speed limitation in curves, simulation results can differ to those of previous versions. **(159138 | 17947 ✅)**

2023.00-05 [255660]   2023-02-17

⊕ New Features and Changes

3D Models

- ⊕ 'Tram - 02' was added to the library of 3D models included with Vissim. It is a variant of the Tram Vario models. **(159160 | 17969)**

Application Examples

- ⊕ The new example 'Multi-Matrix-Import' provides an import for multiple matrix files of *.fma format in one go (by means of a script). It is available at '\Examples Training\Dynamic Assignment\Multi-Matrix-Import' which also includes the example description 'Multi-Matrix-Import ENG.pdf'. **(159137 | 17946)**

✅ Fixed Bugs

3D Models

- ✅ The 'Tram Vario ...' models included in the Vissim installation were slightly updated in the following way:
  - Axle and joint location were slightly corrected (in existing inpx files which refer to front, rear or joint models this may lead to warnings that the dimensions are different from the 3d model file)
  - Pantograph orientation corrected
  - Tram Vario 1000 6Z mid1 & mid2, Tram Vario 1000 8Z mid1 & mid2: Value for width corrected (the actual model showed already the correct width)
  - Tram Vario 6Z & Tram Vario 8Z: Vehicle front can now be colored by Vissim color 4 in the vehicle type.
  (159163 | 17972)

ANM Import

- ✅ Vehicle classes are again created when importing routing information from *.anmRoutes files. **(158597 | 16404)**

Dialogs

- ✅ Selecting a different texture in the Display Types dialog again works correctly. **(159151 | 17960)**

Lists

- ✅ Opened lists of vehicles or pedestrians in the network will not decrease simulation performance anymore. **(158320 | 15473)**
- ✅ Values in list filters are now shown with the correct units according to the network settings. **(159095 | 17901)**

Presentation

- ✅ Vissim now correctly removes the last remaining pedestrians or vehicles during playback of an animation. This also fixes problems and crashes when using the 3D view of the network editor in such situations. **(158589 | 16383)**

Scenario Management

- ✅ The load duration of model transfer files which change the geometry of many links in networks with many nodes was significantly improved. **(159131 | 17940)**

Vehicle Simulation

- ✅ The attribute 'Delay time' of vehicles and related evaluations do not contain invalid values anymore. This could happen in very rare cases if jerk limitation was enabled in the vehicle's driving behavior. **(159162 | 17971)**
- ✅ Trailing vehicles will not falsely assume that the leading vehicle is going to stop inside a conflict area, if the leading vehicle is driving slowly due to speed limitation in curves. This caused the trailing vehicle to needlessly stop in front of the conflict area, if avoid blocking was enabled for that conflict area. **(159090 | 17895 ⓘ)**

ⓘ Breaking Changes

Vehicle Simulation

- ⓘ In networks that have automatic speed limitation in curves enabled and contain conflict areas where avoid blocking the major or minor flow is active, simulation results can differ to those of previous versions. **(159090 | 17895 ✅)**

2023.00-04 [254185]
2023-01-17

✅ Fixed Bugs

Charts

- ✅ The content of open charts of Movements and other dynamically created network objects will not be invalidated anymore at simulation start. On rare occasions, this also caused Vissim to crash. This crash is also fixed now. **(157976 | 14132)**

Graphics

- ✅ Pedestrians controlled by the Driving Simulator Interface now have animations in 3D mode. **(158470 | 16000)**

Vehicle Simulation

- ✅ Vehicles on minor flows in crossing conflict areas that allow blocking of the major flow now make use of blocking the major flow also in case they are not able to leave the conflict area because there is not enough room downstream of the conflict area. **(159077 | 17882 ⓘ)**
- ✅ Vissim no longer crashes if a vehicle chooses a parking route at a decision and, in the same time step, drives over the position of the first outgoing connector of the chosen parking route. **(159068 | 17872)**
- ✅ Vissim no longer crashes or deadlocks when a vehicle on a path of a dynamic routing decision or on a route guidance path diffuses after exceeding the waiting time for a lane change. **(159063 | 17867)**

ⓘ Breaking Changes

Vehicle Simulation

- ⓘ In networks containing crossing conflict areas with the attribute 'Avoid blocking the major flow' disabled, simulation results can differ to those of previous versions. **(159077 | 17882 ✅)**

2023.00-03 [253154]
2022-12-16

⊕ New Features and Changes

Data Model

- ⊕ Simultaneous editing of the attributes 'Signal Controller' and 'Port number' of multiple detectors is now possible. After editing, the type and smoothing factors are adjusted automatically to the values of the detector with the smallest number that has the same signal controller and port number. **(124264 | 7347)**

Formulas

- ⊕ In the 'Insert function' dialog of the formula editor, the displayed names of the following functions were corrected: 'Log' was renamed to 'Ln' to better reflect that the function is the natural logarithm and not base 10 logarithm. The function name 'Wenn' is now correctly translated to 'If'. The function name 'Mod' was replaced with 'Modulo' to avoid misconceptions. Please note that these changes only affect the displayed names in the insert function dialog. The formula syntax itself does not change. All existing formulas continue to be valid. **(131433 | 16692)**

Graphics

- ⊕ The motion animation of 3D Models from FBX files that shall be used by Vissim for animating pedestrians and bicycles can now be selected and previewed in the 2D/3D Model dialog. **(131964 | 17438)**

✅ Fixed Bugs

Signal Control

- ✅ RBC:
  The controller's behavior during pattern changes has been improved. New force-off points respectively yield points are used for signal groups that are green at the time the new pattern takes effect. In some situations, the controller also assigns less green time to coordinated signal groups the first time they turn green after the pattern starts, so that calls for non-coordinated signal groups with open permissive periods can be served more quickly. Also, the behavior in the first cycle after simulation start has been improved in coordinated mode. (811)
  Shortly after the controller changes from coordinated to free-running mode, signal groups could turn amber without a max-out or a gap-out when their coordination split timer expired. This issue has been fixed. (809)
  By default, the RBC dialog shows the Pattern Global parameters of pattern 1 again. (803)
  Pattern start times are now shown in HH:MM:SS format instead of seconds since midnight. (794)
  (132186 | 17779 🔴)

Vissim Kernel

- ✅ The number of cores used by a simulation now defaults to the settings in the simulation parameters of the networks, but may be overridden by the command line parameter of Vissim Kernel. **(130802 | 15778)**

Workspace

- ✅ Copying numerous network objects to the clipboard is now much faster. **(131950 | 17423)**

🔴 Breaking Changes

Signal Control

- 🔴 RBC:
  The behavior of the signal controller may differ when compared to previous versions shortly after simulation start and when a new pattern takes effect. **(132186 | 17779 ✅)**

2023.00-02 [251790]	2022-11-14

⊕ New Features and Changes

Network Editor

- ⊕ Double-clicking on network objects in 3D mode now behaves like in 2D mode: For the respective network object either the edit dialog or the list will open. As before, double-clicking on pedestrians or vehicles changes the view to the driver's or pedestrian's perspective, respectively. **(131629 | 16989)**

✅ Fixed Bugs

Scenario Management

- ✅ When duplicating a scenario, all files located in the folder of that scenario will be copied to the folder of the newly created scenario. Note that this only applies to files, not subfolders. **(131703 | 17091)**

Vehicle Simulation

- ✅ The simulation no longer crashes in certain situations where vehicles with a driving behavior using the car following model 'No interaction' approach multiple conflict areas. **(131968 | 17447 🔴)**

- ✅ Vehicles will not ignore other vehicles in certain situations anymore, if the other vehicle were reversing into parking spaces. **(131813 | 17237 ⚠️)**

Workspace

- ✅ To prevent Vissim from deadlocking or running out of memory, trying to create the dynamic assignment graph in large networks with very few nodes or a single node will now cause an error. These previously mentioned problems were caused by the huge number of parallel edges between nodes in such networks. Please refer to the documentation how to correctly model nodes for dynamic traffic assignment. **(131196 | 16367)**
- ✅ Trying to create the dynamic assignment or evaluation graph in large network with only a few nodes or a single node will not cause crashes anymore. This also applies to starting the simulation dynamic assignment or node evaluation enabled. **(128973)**

⚠️ Breaking Changes

Vehicle Simulation

- ⚠️ In simulations containing vehicles with a driving behavior using the car following model 'No interaction', results can differ to those of previous versions. In addition, the insertion time points of vehicles with vehicle types of category 'Pedestrian' may differ to those of previous versions. Furthermore, in simulations which make use of the driving behavior option 'diamond queuing', simulation results may slightly differ to those of previous versions. **(131968 | 17447 ✅)**
- ⚠️ Networks containing reversing in parking lots may produce different results compared with previous versions. **(131813 | 17237 ✅)**

2023.00-01 [250046]

<div align="right">2022-09-28</div>

⊕ New Features and Changes

3D Models

- ⊕ With version 2023 the default 3D models, which are included in the installation, are provided in the more commonly used FBX file format. The former files of v3d format will still be delivered for a limited period in the subdirectory '\3DModels_Legacy (files will not be distributed with future versions)'. However, they will not be part of future versions.
  For network files written by version 2022 and earlier, the file references to the standard 3D models are updated automatically to a far extent, making the transition to the new 3D models as smooth as possible. For some models there may be minor changes in one or more attributes (such as axle positions, length, doors) which may lead to small changes during the simulation. These adaptions are recorded in the log file. For most standard models the data is identical. In case door data was defined manually in Vissim for any standard 3D model, these data needs to be newly defined after the automatic adaption.
  Only if there are substantial differences between a former and its corresponding new 3D model, a warning is generated. Then a repair function is offered through the message window which provides several options to fix the network file.
  As for static 3D models which contain an animation (like a moving barrier), the replacement with the corresponding FBX model requires also the animation control to be adapted. Therefore, the file references to these models are not adapted automatically, as the mere model change might break the original functionality. In these cases also a repair function is provided which allows to copy the original model locally for future use. **(132054 | 17562 ⚠️)**

Application Examples

- ⊕ Bosch emission calculation: There are new exemplary emission class distributions for England, Scotland, and Wales. **(131632 | 16993)**

DriverModel.DLL Interface

- ⊕ DRIVER_DATA_RADIUS will now be the value of the attribute 'Radius' of the next downstream Point 3D of a link that a vehicle can react to. **(131992 | 17479 ⚠️)**

File Handling

- ⊕ Networks in the *.inp format can longer be read in by Vissim 2023. These networks can be converted to *.inpx format using Vissim 2022. **(131782 | 17194)**

Graphics

- Playback of animations of network objects of type Static 3D Model may be reversed using the new attribute 'Reverse playback animation (3D)', which is useful for animating opening and closing doors, for example. **(131940 | 17411)**
- The Vissim specific attributes of 3D models (length , with, height, positions of axles, joints and shaft, parts without passengers) can now be defined using common 3D modelling tools and be imported automatically in Vissim using the Filmbox format (*.fbx). **(131830 | 17260)**
- Variable message signs can now be visualized in 3D. Therefore, arms of 3D traffic signals offer the new types 'Gantry' and 'Gantry Bar'. The signs can be displayed as small pictures (textures) of traffic signs which can be changed through the attribute 'TextureFilename'. This can be done during a simulation run by means of attribute modifications, for example. **(131544 | 16854)**

Installation

- Academic packages as product variants: Academic licenses are now configured differently than before. **(132051 | 17556)**
- The CodeMeter Runtime deployed with PTV Vissim has been updated to CodeMeter 7.50. **(132046 | 17547)**
- Vissim Viewer is no longer available. Instead, an installation of the common Vissim version can be used with the included demo license. **(132026 | 17523)**

Signal Control

- RBC:
  Error and warning messages are now shown in Vissim's message window. They are no longer recorded in a separate file.
  In coordinated mode, the simulation start time setting is taken into account when computing the cycle second. The offset attribute is interpreted relative to midnight.
  An issue was fixed regarding the computation of permissive periods. In certain situations, calls for non-coordinated signal groups with open permissive periods could be wrongly ignored.
  In coordinated mode, Dual Entry is now taken into account when deciding whether to turn a signal group green after its permissive period has closed. This can happen when no signal groups are active in a ring. **(132090 | 17611)**

SignalController.DLL Interface

- Strings of arbitrary length can now be transferred to and from Vissim using the GetStringValueW functions of the signal controller API. **(131178 | 16348)**

Vehicle Simulation

- Vehicles now automatically adjust their speed in curves. There is no need anymore to place reduced speed areas in each curve. The curve speed may be defined for each vehicle type as a function of the curve radius. A detailed description of using this feature is available in the document "What's new in PTV Vissim/Viswalk 2023". **(118665)**

Viswalk

- BIM Import (*.ifc) now also produces a Static 3D Model of the imported building that can be used for visualization. **(131560 | 16877)**

✅ Fixed Bugs

COM Interface

- Use of the COM functions 'MoveLinkDuringSimulation' and 'MoveLinkToPointDuringSimualtion' will not produce large amounts of errors related to conflict areas anymore. **(129455 | 13904)**

Charts

- Attributes with subattributes are now available in the attribute selection for scatter plots, even if only result attributes of the current (multi-) run are kept. **(131659 | 17036)**

Dialogs

- Crash when exiting the WMS dialog: A crash no longer occurs when exiting the 'WMS map layer' dialog via the OK button if no connection has been created or selected yet. **(132007 | 17497)**

DriverModel.DLL Interface

- ✅ An active lane change is never completed by Vissim if DRIVER_DATA_SIMPLE_LANECHANGE was set to 0, even if a vehicle is already with its full width on the target lane when the middle of the front end reaches the target lane. **(132059 | 17569)**
- ✅ DRIVER_DATA_LANE_WIDTH: Vissim now sends the correct lane width for each lane. Previously, the width of the vehicle's lane was sent for each lane. **(132070 | 17584)**

Evaluations

- ✅ Accelerating vehicles with jerk limitation enabled will not generate delay after leaving a reduced speed area or after increasing their desired speed. **(132068 | 17582 ⚠)**
- ✅ Pedestrian network performance: During computation of specific evaluation attributes, data from the previous and current time step is no longer mixed up. **(130895 | 15923 ⚠)**

File Handling

- ✅ Vissim no longer crashes when reading networks with duplicated conflict areas, that have their link pair exchanged. This problem occurred when reading very old networks into Vissim 2022 SP7 or Vissim 2023 Beta. **(132082 | 17598)**

Graphics

- ✅ Textures assigned to object groups in SketchUp files (*.skp) are now displayed correctly in Vissim. **(132074 | 17589)**

Lists

- ✅ Attribute modifications: Invalid values for the attribute "target attribute" are now shown in strike-through. **(131557 | 16872)**

Network Editor

- ✅ Create car park: the geometry of generated connectors was improved in specific cases. **(131884 | 17332)**
- ✅ Editing the start position of a PT line now preserves intermediate route locations of the PT line. **(131965 | 17443)**
- ✅ When dragging the start of a conflict marker onto overlapping links, the link containing the end position of the conflict marker is now preferred. **(131537 | 16846)**

Scenario Management

- ✅ Vissim no longer sporadically crashes when loading a scenario containing conflict areas with links that are pedestrian areas. **(131938 | 17407)**

Signal Control

- ✅ The cycle second of signal controllers with type 'Fixed Time (simple)' is now computed relative to midnight instead of relative to the start time of the simulation. **(132057 | 17567 ⚠)**

Simulation

- ✅ Vissim does not crash in rare situations anymore, when running out of memory during a simulation. Instead, the simulation is now cancelled and an appropriate error message is displayed. **(132048 | 17553)**

Vehicle Simulation

- ✅ A problem causing parking-in vehicles to block each other has been resolved. **(131894 | 17345 ⚠)**
- ✅ If the slow lane rule is enabled, vehicles now always use the speed of the vehicles on the faster lane to determine if they may overtake on the slower lane. Previously, the speed on the slower lane was considered depending on the traffic rule. **(132033 | 17532 ⚠)**
- ✅ Vehicles approaching conflict areas now react to other vehicles blocking the conflict area with their rear, even if the blocking vehicle already left the conflict area by taking an outgoing connector. **(131674 | 17057 ⚠)**

Viswalk

- ✅ Installing updates of Viswalk now also updates the application examples. **(132055 | 17563)**
- ✅ Pedestrians do not have to evade invisible obstacles at the start and end of ramps with a shape other than 'Straight' anymore. These obstacles were created erroneously at the start of a simulation depending on the orientation and geometry of ramps. **(132017 | 17510 ⚠)**

- ✅ Pedestrians near the end of ramps, elevator doors and PT vehicle doors now better evade other nearby pedestrians. **(131962 | 17436 ❗)**
- ✅ Several issues during the BIM import (*.ifc) were fixed. This also reduces the number of warnings produced by the BIM import. **(130773 | 15730)**

Workspace

- ✅ Vissim is now much more responsive when selecting very large amounts of objects in lists or the network editor. **(131949 | 17422)**

❗ Breaking Changes

3D Models

- ❗ The automatic adaption of standard 3D models to FBX format may lead to minor changes in model dimensions and hence in the simulation. **(132054 | 17562 ➕)**

DriverModel.DLL Interface

- ❗ The values for DRIVER_DATA_RADIUS sent by Vissim will be different from those of previous versions **(131992 | 17479 ➕)**

Evaluations

- ❗ Pedestrian network performance results can be different when compared to previous versions. **(130895 | 15923 ✅)**
- ❗ The delay of vehicles can differ to those of previous versions. **(132068 | 17582 ✅)**

Signal Control

- ❗ In networks containing signal controllers with type 'Fixed Time (simple)', simulation results can differ to those of previous versions. **(132057 | 17567 ✅)**

Vehicle Simulation

- ❗ In networks where multiple incoming or outgoing connectors at the same link position, simulation results can differ to those of previous versions. **(132021 | 17514)**
- ❗ In networks where vehicles reverse into parking lots, simulation results can differ to those of previous versions. **(131894 | 17345 ✅)**
- ❗ In networks with intersection controlled by conflict areas simulation results can differ to those of previous versions. **(131674 | 17057 ✅)**
- ❗ In networks with slow lane rule enable, simulation results can differ to those of previous versions. **(132033 | 17532 ✅)**

Viswalk

- ❗ In networks containing ramps with shapes other than 'Straight', simulation results can differ to those of previous versions. **(132017 | 17510 ✅)**
- ❗ In networks containing ramps, elevators or PT stops, simulation results can be different when compared to previous versions. **(131962 | 17436 ✅)**

2023.00-00 [247342]   2022-07-28

➕ New Features and Changes

COM Interface

- ➕ All evaluations can now be disabled by a single call of the COM function "Vissim.Net.Evaluation.DisableAllEvaluations()". They stay disabled after a simulation run, and if the network is saved, the disabled state is written to the *.inpx file. **(129110 | 13412)**
- ➕ Several checks have been integrated into the COM function "MoveToLinkPosition" of vehicles, preventing undefined behavior or crashes. **(131591 | 16928 ❗)**

Data Model

⊕ Detectors have the new attribute "Distance in front of stop line", which can be edited if the detector is in front of a signal head on the same link to change the position of the detector. **(126242 | 9600)**

⊕ Pavement markings have the new attribute "Distance to stop line", which can be edited to change the position of the pavement marking if it is located upstream of a signal head on the same link. **(129152 | 13487)**

Dialogs

⊕ The color definition dialog now also provides previews for changing hue and lightness. **(131415 | 16665)**

Formulas

⊕ Access to n-th word in a string: The new WORDN function can be used to access the n-th word that is created from a string when it is split into words using a specified separator. **(131497 | 16782)**

Graphics

⊕ Lane markings can now be customized for each lane separately by creating new "Lane Marking Types" and assigning them to the "Marking Type" attribute of Lanes. The list of "Lane Marking Types" can be opened via the menu entry Base Data -> Lane Marking Types. See the document "Vissim 2022 - what's new.pdf" for details. **(130365 | 15201)**

⊕ Vissim now supports 3D models of FBX (Filmbox) format, including animations. These models may be used for pedestrians, vehicles, or static 3D models. See the document "Vissim 2022 - what's new.pdf" for details. **(131539 | 16849)**

Installation

⊕ Python: Vissim now installs Python 3.9 as an embedded package below the Vissim-Exe directory. This ensures that a compatible Python version is used by Vissim scripts and reduces interference with system-wide Python installations. It is not required to manually install Python anymore. **(131597 | 16936)**

Meso Simulation

⊕ All nodes required for a Meso simulation of a network suitable for dynamic assignment can now be created automatically. The function can be accessed via a menu entry under "Traffic -> Dynamic Assignment", or via the context menus of the node list or a selected node in the network editor. See the document "Vissim 2022 - what's new.pdf" for details. **(130376 | 15213)**

⊕ The requirement of links of Meso turns to have an identical number of lanes was relaxed to simplify the modelling of nodes used for Meso. Instead, the number of Meso lanes is set to the minimum number of lanes of all links contained in the Meso turn. **(130369 | 15206)**

Network Editor

⊕ A single link can now be rotated by dragging it while holding the Alt key pressed. The "Generate Spline" functionality that formerly was accessed by this gesture is now accessible by holding Alt and dragging the mouse with the RIGHT mouse button held down. **(124691 | 7808)**

⊕ Connectors can now be dragged and duplicated like links, without having to select either the From-link or the To-link. The geometry of the connector will be kept. The ends of the connector must overlap with links to successfully complete the action. **(130300 | 15114)**

⊕ The mouse gesture for generating a spline for a selected link was changed to holding down the Alt key + dragging with the right (instead of left) mouse button held down. The former gesture now rotates the entire link, like rotating other network objects. **(131618 | 16972)**

Signal Control

⊕ Fixed Time (simple): the attributes of the signal controller and its signal groups are now editable during simulations. **(131895 | 17350)**

Viswalk

⊕ Pedestrians riding elevators will not generate delay anymore. **(128680 | 12826 🔴)**

Workspace

⊕ Duplication of multiple selections, especially when containing network objects of different types, has been vastly improved, making copy and paste much more intuitive to use. See the document "Vissim 2022 - what's new.pdf" for details. **(130643 | 15555)**

- ⊕ Pedestrian routes can now be duplicated or copy and pasted much more intuitively, even as part of multiselections. If the multiselection contains also the routing decision as well as the area of the routing decision, a new routing decision for the duplicated route will be created, otherwise the route is attached to the already existing routing decision. **(130299 | 15112)**
- ⊕ There is a new context menu entry for 2D/3D models and 2D/3D model segments to reset attribute values to those of the 3D model referenced by the 3D model file. The context menu entry is only available if the 3D model file exists and the attribute values actually differ from those of the 3D model. **(131355 | 16572)**
- ⊕ Two networks can now be compared within Vissim. Their differences are visualized in the new "Network Comparison" window as well as the network editor. See the document "Vissim 2022 - what's new.pdf" for details. **(126365 | 9743)**

⚠ Breaking Changes

COM Interface

- ⚠ Event based scripts trying to start, step or stop a simulation will now cause an error. **(131302 | 16503)**
- ⚠ Simulations using scripts that call the COM function "MoveToLinkPosition" may yield results that differ from those of previous versions. **(131591 | 16928 ⊕)**

Meso Simulation

- ⚠ Results of meso simulations of networks with PT lines starting inside nodes used for meso may differ when compared to previous versions. **(131807 | 17228)**

Presentation

- ⚠ ANI recordings (*.ani) created with Vissim 2022 or an earlier version are not compatible with ANI recordings of Vissim 2023 and vice versa. Trying to replay an incompatible ANI recording will result in an error message. **(131902 | 17360)**
- ⚠ Animation recorded with previous Vissim versions cannot be replayed with the current version and vice versa. **(131906 | 17365)**

Signal Control

- ⚠ Signal controllers using PT calling points may behave differently compared to previous versions. **(131640 | 17007)**
- ⚠ Signal controllers with detectors near parking spaces where vehicles reverse in or out may behave differently compared to previous versions. **(131788 | 17203)**

Simulation

- ⚠ If attribute modifications or event based scripts at the end of a time step are used during a simulation, results and ANI recordings may differ compared to those of previous versions. **(131609 | 16955)**

Vehicle Simulation

- ⚠ Results of simulations where vehicle approach conflict areas with high speeds may yield different results when compared to previous versions. **(131127 | 16272)**
- ⚠ The results of simulations with vehicles stopping at stop signs on links with multiple lanes may differ when compared to previous versions. **(131824 | 17251)**

Viswalk

- ⚠ If during simulations, multiple PT vehicles stop at PT stops with a common waiting area in the same time step, simulation results may differ when compared to previous versions. **(131424 | 16679)**
- ⚠ Simulation results of pedestrian delays in networks containing elevators will differ from those of previous versions. **(128680 | 12826 ⊕)**