PTV Vissim & Viswalk 2024
Release Notes

Last modified: 2024-01-15

2024.00-04   [272727]

2024-01-11

⊕ New Features and Changes

Installation

⊕ Startup accelerated: The program startup has been accelerated slightly. **(200423)**

Viswalk

⊕ To prevent pedestrians that try to board an elevator cabin from blocking a door indefinitely, the attribute 'Maximum pedestrian door blocking time' was added to elevator groups. When this time is up, pedestrians blocking elevator doors while boarding the cabin will choose another elevator of the group or return to the waiting area. **(158235 | 15091)**

✅ Fixed Bugs

Data Model

✅ Conflict areas between parallel links are now created correctly. **(200575 ❗)**

Viswalk

✅ Pedestrians no longer ignore priority rules in certain situations. **(211257 ❗)**

Workspace

✅ Vissim no longer freezes when a background map is displayed in the network editor window or the smart map. **(210901)**

❗ Breaking Changes

Data Model

❗ Due to the slightly changed geometry of conflict areas, simulation results can differ to those of previous versions. However, the differences are typically very small and within the numerical precision of the calculation. **(200575 ✅)**

Viswalk

❗ In networks containing priority rules and conflict markers on links that are pedestrian areas, simulation results can differ to those of previous versions. **(211257 ✅)**

2024.00-03   [271760]

2023-12-15

⊕ New Features and Changes

3D Models

⊕ Two new tram models were added to the Vissim 3D model library that is included in your Vissim installation by default:
"TramTrain - Stadler Citylink DS": A dual-direction tram with dual electrical system (DS) enabling it to run both on light- and heavy-rail tracks. In the field, it will start operating in 2025 in various regions around Europe. It replaces the "GT8-2S" tram as the new default model.
"Tram - Stadler Citylink": Based on the same technical platform, this is a single-direction tram with low floor and single-sided doors, typically operating in city centres. Both trams are available in two variants: one with fixed predefined colors (...fixColor...), the other with colors determined by the color attributes of the vehicle type and PT line. **(207834)**

Cloud

⊕ Improved error messages: For example, if there are errors while trying to save a cloud model, e.g. because the Revision was deleted, on which the change to be saved is based on, usefull error messages are now displayed. **(203810)**

⊕ Increased data transfer rate: The data transfer rate between desktop products and the Vision Cloud was improved **(87359)**

Data Model

⊕ The value of 'Pause at' in the network editor toolbar or the attribute 'Break at' of the simulation parameters is now a floating point type, enabling to break any time step. If the value of 'Break at' does not match that of a time step, the simulation or animation will be paused at the first time step with a simulation time larger than the value of 'Break at'. **(200907)**

Graphics

⊕ 3D Model files (*.fbx) for PT vehicles may now provide a custom property 'Vissim Floor ZOffset' for each door. When loading the model, the value will be written to the attribute 'ZOffset' of doors of 2D/3D model segments to ensure that pedestrians walk on and not inside the floor of PT vehicles. **(203879)**

⊕ Material properties, such as shininess, are now correctly imported from 3D model files (*.fbx) to improve the visualization of the models. **(193943)**

Installation

⊕ Improved startup duration: The duration of the program start of the product has been improved in various cases, especially in network environments with multiple license servers. **(203974)**

⊕ Update CodeMeter Runtime: The CodeMeter Runtime deployed with PTV Vissim has been updated to CodeMeter 8.00. **(208184)**

Network Editor

⊕ Elevation data for links can now be imported from GeoTIFF data sources. **(166291)**

Test Function

⊕ When the user preference 'Activate detector on single click' is enabled, repeated or continous actuation of a detector can now be triggered by clicking a detector with the left mouse button while pressing the Ctrl or Shift key, respectively. **(159040 | 17835)**

Vehicle Simulation

⊕ Vissim now supports 2D/3D model segments with only one axle by setting the position of the front and rear axle of a segment to the exact same value. This enables modeling of trailers and tram segments with one axle. **(158373 | 15718)**

Vissim Kernel

⊕ The DriverModel interface is now available for the Vissim Kernel on Linux operating systems. **(194797)**

Viswalk

⊕ Pedestrians entering the start of a travel time measurement multiple times no longer cause warnings. As before, only the time when first entering the start of the travel time measurement will be used. **(199824)**

✔ Fixed Bugs

ANM Import

✅ The runtime of the ANM import was reduced significantly for large networks. **(197325)**

Data Model

✅ The attribute 'Cost per km' of links now has a maximum value of one million to avoid numerical issues doing shortest path computation. **(202315)**

Dialogs

✅ The expiration date of the license is again displayed correctly in the 'License' dialog. **(202172)**

Evaluations

✅ 'Area measurements (raw data)' now correctly handles the following cases: Pedestrians enter or leave an area measurement while the evaluation is not yet active. Pedestrians remain inside the area measurement while the evaluation becomes inactive. Pedestrians are inside an area measurement while the evaluation stops. **(158851 | 17314 ⛔)**

File Handling

✅ Line breaks in the comment of the simulation parameters are now replaced with spaces when writing path (*.weg) and cost (.bew) files, as wells as other output files, since the line breaks caused errors when reading the files back in. **(195535)**

Graphics

✅ The inside of 3D models (*.fbx) is now rendered correctly. **(189883)**

✅ When trying to import 3D models from FilmBox files (*.fbx) with an unsupported version, Vissim now generates an error message instead of silently creating an empty 3D model. **(181031)**

Installation

✅ Check for license updates led to error message: The check for license updates, which is carried out each time the program is started, resulted in a blocking error message if the check could not be carried out (e.g. server not reachable). This error has been fixed. **(204542)**

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)**

Network Editor

✅ Area labels can be moved again in the network editor. **(199946)**

✅ Labels of a network object are no longer displayed twice in the network editor when the network object with the label is selected. **(199944)**

✅ Labels of vehicles are now placed correctly onto the respective vehicles. **(191235)**

✅ Queue lengths are now also visualized even if the respective queue counters are outside of the visible section of the network editor window. **(197659)**

✅ Vissim no longer crashes when trying to change the size of a background image from a PDF file in the network editor. **(203215)**

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 calculation of curve radii of link points for automatic speed reduction in curves was improved significantly, yielding much more realistic speeds of vehicles driving through curves. **(199459 ⛔)**

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

- The visualization of train and tram segments was improved. They no longer jitter while driving through reasonably sized curves or when the train is far away from the map's reference point. Also, the position of the front joints is now computed correctly and no longer forced to the center between tracks. **(204486 ⚠)**
- Train or tram segments no longer jitter or jerk in curves, especially when the front joint and front axle of a segment are not located at the same position along the 2D/3D model segment. **(158001 | 14193 ⚠)**
- Vehicles approaching a blocked conflict area now brake more evenly, allowing conflicting vehicles to better recognize that they will stop in front of the conflict area. **(209219 ⚠)**

Vissim Kernel

- Relative file paths from the command line are again resolved correctly. **(202581)**

Viswalk

- An issue with pedestrian attribute decisions affecting user defined attributes was fixed. The issue caused non-reproducible results or crashes. **(199305 ⚠)**
- Signal heads and priority rules affecting only specific pedestrian classes again correctly consider the class of a pedestrian after the type of the pedestrian was changed during the simulation. **(202875 ⚠)**
- Vissim no longer crashes when pedestrians approaching a pt vehicle for boarding enter an elevator cabin while the pt vehicle departs. **(206552 ⚠)**

Workspace

- Execution of an attribute modification that fails for specific network objects will not cause the changes to other network objects by this attribute modification to be discarded. Only the network objects for which the attribute modification failed remain unchanged. **(198903 ⚠)**
- In rare cases it was possible that the software stopped working when Bing maps were activated. This issue was fixed. **(208177)**
- Test runs or the replay of animations can again be stopped by pressing the ESC key while being paused. **(204159)**
- Vissim no longer deadlocks if the Bing Maps server is unavailable. **(187994)**

⚠ Breaking Changes

Evaluations

- The results of 'Area measurements (raw data)' may differ to those of previous versions. **(158851 | 17314 ✓)**

Vehicle Simulation

- In networks with 'Speed limitation in curves' enabled in the network settings, simulation results can differ to those of previous versions. **(199459 ✓)**
- In networks with vehicles with 2D/3D models containing multiple segments, and where vehicles consider adjacent lanes or that contain pedestrians at PT stops, simulation results can differ to those of previous versions. **(204486 ✓)**
- Simulation results may differ to those of previous versions in specific cases due to changed vehicle behavior at merging conflict areas. **(207833 ✓)**
- Simulation results of networks with crossing conflict areas can differ to those of previous versions. **(209219 ✓)**
- Simulation results with trains and trams might differ from those of previous versions due to the improved method for calculating the positions of the train segments. This might affect other vehicles if observe adjacent lanes is enabled in the driving behavior. Moreover, the door locations might change slightly, causing boarding and alighting pedestrians to move differently. **(158001 | 14193 ✓)**

Viswalk

- In networks where pedestrian can approach pt vehicles via an elevator, simulation results can differ to those of previous versions. **(206552 ✓)**
- In networks with pedestrian class specific signal heads or priority rules, simulation results may differ to those of previous versions. **(202875 ✓)**
- Simulation results of networks with pedestrian attribute decisions that are applied to user defined attributes may differ from those of previous versions. **(199305 ✓)**

Workspace

- The results of simulations executing attribute modifications that fail for at least one network object may differ from those of previous versions. **(198903 ✓)**

2024.00-02 [269248]

⊕ New Features and Changes

Data Model

- ⊕ The minimum lane width has been reduced to 1 mm. This improves the link geometries of networks imported via ANM and OpenDRIVE. **(199618)**
- ⊕ When trying to edit the z-offsets of the first and last point of a connector, the error message now clearly states that this is not possible, since these points must be located on the from-link and to-link, respectively. Instead, the z-offsets of the from-link and to-link should be edited. **(192165)**

Evaluations

- ⊕ All numeric attributes of queue counters may now be selected for the queue length visualization, including numeric user defined attributes. **(197517)**

Installation

- ⊕ Update of curl: The libcurl library used for network data transfer has been updated to version 8.4. This closes a prominent security vulnerability. **(198224)**

Signal Control

- ⊕ Fixed Time: The attribute 'internal supply data' is now editable to allow for automated import of data from user generated *.sig files via scripts. The value of the attribute must be a Base64 encoded string. Trying to set the attribute to a string that is not Base64 encoded will result in an error. **(190314)**
- ⊕ RBC: Omitted vehicle signal groups are not visualized in the sequence diagram of the RBC editor anymore. **(192978)**

Vehicle Simulation

- ⊕ Improved parallel computation of the vehicle simulation further reduces the runtime of the simulation on average by about 40%. Please note that the improvements vary considerably depending on the simulated network. **(158151 | 14708)**

Vissim Kernel

- ⊕ The number of simulations runs in the simulation settings of the network can now be overridden with the command line parameter '--numRuns'. **(195639)**

✓ Fixed Bugs

ANM Import

- ✓ Very narrow lanes no longer cause the ANM import to fail. **(195804)**

COM Interface

- ✓ Vissim no longer sporadically crashes or deadlocks when executing COM scripts. **(194182)**

Dialogs

- ✓ The option 'Advanced merging' in the lane change tab of the driving behavior dialog has been removed, because this option is always enabled since Vissim 2024 and cannot be disabled anymore. **(200759)**

Evaluations

- ✓ Queue length visualization now shows the full queue length, even in case the lane the queue end is upstream of the beginning of the queue counter's lane. **(192744)**
- ✓ The evaluations 'Areas & ramps' and 'Area measurements' do not cause Vissim to crash anymore if any pedestrian arrived at its destination or is deleted before the from-time of these evaluations. **(198972)**

Network Editor

- ✅ Duplicating a selection of network objects of various types by dragging while holding the CTRL key now also works when the mouse initially hovers over network objects located on links. **(188188)**
- ✅ Labels are no longer hidden or clipped in the network editor when running a simulation or using quick mode. **(196067)**
- ✅ Multiresolution seamless image databases (MrSID, *.sid files) containing transparency information can now be displayed as background images. **(192820)**
- ✅ The simulation performance is no longer decreased considerably by activating Bing background maps in the 2D network editor. **(194891)**
- ✅ Vehicles and pedestrians are no longer visualized in quick mode if labels use attributes with source 'Calculated', 'Evaluation' or 'Simulation'. This caused the simulation performance to decrease significantly. **(199967)**
- ✅ Vissim no longer crashes when copying selections containing links and conflict areas while 'Conflict Areas' is selected in the network objects sidebar. **(192103)**
- ✅ Zooming in the network editor via the mouse wheel is now more reactive again. **(195131)**

OpenDRIVE Import

- ✅ The generated link geometry for OpenDRIVE roads with geometry elements of type 'poly3' and 'paramPoly3' has been improved in certain cases. **(182445)**

Presentation

- ✅ Vehicle and pedestrian labels are now included in video recordings that are recorded while quick mode is active. **(195186)**
- ✅ Vissim no longer crashes when starting a simulation with video recording enabled after loosing the connection to the background map service. **(194187)**

Vehicle Simulation

- ✅ Vehicles no longer ignore other vehicles that were inserted into the network in the current time step. **(198505 ❗)**
- ✅ Vissim no longer crashes when vehicles reverse in or out of parking lots, and the vehicle routing decision parking is located very close to the connector leading to the parking lot. Since this modeling is not supported, a corresponding warning message will now appear at simulation start. **(198092 ❗)**
- ✅ Vissim no longer deadlocks in very specific situations when vehicles plan or execute overtaking maneuvers of PT vehicles in PT stops. **(192729 ❗)**

Viswalk

- ✅ Elevators again correctly determine their next travel direction based on the current hall calls of pedestrians waiting at the waiting areas of the elevator group. **(197735 ❗)**
- ✅ Pedestrians are again able to execute multiple static routing decisions per time step. But they will not execute the same static routing decision in a time step twice. **(197436 ❗)**
- ✅ Pedestrians intending to stand or walk on either the left or the right side of an escalator or moving walkway again approach their chosen side while walking on the landing platforms. **(198738 ❗)**
- ✅ Pedestrians no longer ignore signal heads or priority rules on pedestrian links that are cut by obstacles into multiple pieces. Signal heads or priority rules must not be covered completely by obstacles. In case signal heads or priority rules on pedestrian links are cut by obstacles into multiple pieces themselves, all pieces must be located on the same connected region of walkable ground. **(157058 | 10912 ❗)**
- ✅ Pedestrians no longer ignore signals, priority rules, conflict areas or boarding delays in specific situations. They will also no longer ignore the option 'Capacity is exact' of PT vehicles in rare cases. **(189646 ❗)**
- ✅ Pedestrians yielding at conflict areas with avoid blocking the major flow enabled now use the attribute 'Minimum gap blocking (default)' instead of 'Rear gap (default)' to determine if they may enter a conflict area before an approaching vehicle. In addition, the attribute 'Rear gap (default)' now defines the minimum time gap in seconds between a yielding pedestrian leaving the conflict area and the front end of a vehicle entering the conflict area. **(157529 | 12536 ❗)**
- ✅ The movement of pedestrians at certain rare time points in the simulation is no longer executed twice or skipped, causing crashes or incorrect evaluations. **(196708 ❗)**
- ✅ The route choice of pedestrians between different elevators and ramps has been improved in case areas with non-zero z offsets are involved. **(195581 ❗)**
- ✅ The simulation start no longer aborts with an internal error if a pair of areas is used for multiple pt stops as waiting area and platform edge, respectively. **(198687)**

- ✅ The value of the pedestrian attribute 'remaining distance' of queuing pedestrians now shows the distance to the queue head instead of the distance to the last pedestrian in the queue. **(157714 | 13206 ❗)**
- ✅ Yielding pedestrians at conflict areas with additional stop distance now better judge the time they need to cross the conflict area, allowing them in more situations to cross the conflict area. **(157531 | 12544 ❗)**

Workspace

- ✅ There is a confirmation dialog now for canceling a simulation run when pressing the ESC key while a simulation is running to prevent accidentally cancelling the simulation. The confirmation dialog can be disabled in the user preferences. **(194546)**

❗ Breaking Changes

Vehicle Simulation

- ❗ In all networks, simulation results can differ to those of previous versions. **(192729 ✅)**
- ❗ In networks containing parking lots with parking direction not equal to 'forward > forward', simulation results can differ to those of previous versions. **(198092 ✅)**
- ❗ Simulation results of all networks can differ to those of previous versions. **(198505 ✅)**

Viswalk

- ❗ In networks containing areas with non-zero z-offsets, the route choice of pedestrians can differ from those of previous versions. **(195581 ✅)**
- ❗ In networks containing conflict areas with an additional stop distance where pedestrians yield, simulation results differ to those of previous versions. **(157531 | 12544 ✅)**
- ❗ In networks containing conflict areas with yielding pedestrians that are allowed to block the major flow, simulation results can differ to those of previous versions. The old behavior may be restored by setting the value of 'Minimum gap blocking (default)' to the value of 'Rear gap (default)' and then setting the latter to zero seconds. **(157529 | 12536 ✅)**
- ❗ In networks containing pedestrian links with signal heads or priority rules that are cut by obstacles, simulation results can differ to those of previous versions. **(157058 | 10912 ✅)**
- ❗ In networks containing signals, priority rules or conflict areas for pedestrians, as well as pt vehicles with boarding delays or the option 'Capacity is exact' enabled, simulation results can differ to those of previous versions. **(189646 ✅)**
- ❗ Simulation results in networks where the decision area of a static route overlaps with its destination area can differ to those of previous versions. **(197436 ✅)**
- ❗ Simulation results of all networks can differ to those of previous versions. **(196708 ✅)**
- ❗ Simulation results of all networks containing elevators can differ to those of previous versions. **(197735 ✅)**
- ❗ Simulation results of networks containing escalators or moving walkways with standing location either left or right can differ to those of previous versions. **(198738 ✅)**
- ❗ The results for the attribute 'flow towards destination (average)' of the pedestrian network performance evaluation can differ to those of previous versions. **(157714 | 13206 ✅)**

2024.00-01 [267606]

⊕ New Features and Changes

3D Vehicle Models

- ⊕ Over 40 new vehicle models of various types (including car, SUV, van, bus, HGV, motorbike, scooter) of recent model years and various world regions were added to the library of Vissim models, including vehicles with hybrid and electric propulsion. Also the standard vehicle models used in 'defaultx.inpx' were updated. **(159125 | 17933)**

Data Model

- ⊕ The new data type 'Color' is available for user defined attributes. Editing the attribute opens the color dialog known from the graphics parameters. In addition to the ARGB values of the color, a box filled with the color will be shown in lists. See the document "Vissim 2024 - What's new.pdf" for details. **(158317 | 15458)**

DriverModel.DLL Interface

- ⊕ The Visul Studio solution for the DriverModel API example in the Vissim installation has been updated. **(188058)**

EmissionModel.DLL Interface

⊕ The Visul Studio solution for the EmissionModel API example in the Vissim installation has been updated. **(195520)**

Formulas

⊕ A new function 'Color(a, r, g, b)' has been introduced to determine the color value from separate values for alpha, red, green, and blue. The separate values are expected to be integers in the range from 0 to 255. **(168018)**

Graphics

⊕ Vissim can now use 3D models from SketchUp files (*.skp) with SketchUp version 2023. **(183413)**

Vehicle Simulation

⊕ The simulation runtime was reduced significantly for a wide range of networks, and the usage of multiple CPU cores has been improved. See the document "Vissim 2024 - What's new.pdf" for details. **(158947 | 17651 ❗)**

⊕ Vehicles are now able to perform zipper merging in merge or lane end situations. This behavior is enabled by default in newly created networks. For already existing networks, it can be configured in the driving behavior dialog in the lane change tab. See the document "Vissim 2024 - What's new.pdf" for details. **(166678)**

Vissim Kernel

⊕ Networks with signal controllers of type "Fixed Time" can now be simulated using Vissim Kernel running on Linux operating system. See the document "Vissim 2024 - What's new.pdf" for details. **(168286)**

✓ Fixed Bugs

Dialogs

✓ The dialogs "Link" and "Generate Spline" are now properly displayed on high resolution displays with a large scaling factor. **(179578)**

✓ The layout of the pedestrian route location dialog does not become unusable if the route location's area is on a level with a very long name. **(187549)**

DriverModel.DLL Interface

✓ The value for DRIVER_DATA_ROUTE_SIGNAL_SWITCH transmitted from Vissim was corrected for specific signal group sequences. **(187597)**

Driving Simulator Interface

✓ The motion state of pedestrians, that are controlled via the driving simulator interface, is now correctly determined while crossing ramps. **(186520)**

File Handling

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

Meso Simulation

✓ The attribute 'Meso critical gap' of conflict areas is now shown as not relevant if the conflict area has the status 'undetermined', since the value of the attribute is not used in the simulation in that case. **(192368)**

✓ Vehicles entering a micro section perform an improved lane choice to avoid congestion. **(189204 ❗)**

✓ Vehicles exiting a micro section while changing lanes will not cause a crash anymore if they enter another micro section where the driving behavior option 'Observe adjacent lanes' is active. **(194778)**

✓ Vehicles transitioning from a meso to a micro region now correctly interact with protruding rear edges of micro vehicles that left the link with the transition via a connector. **(193534 ❗)**

✓ Vissim no longer crashes when vehicles exit a micro section from within branching or merging conflict areas, while other vehicles with specific driving behavior enter this micro section upstream of that conflict areas. **(195007)**

Network Editor

✓ Duplicating a mixed selection containing links that are used as pedestrian areas, detectors, and signal heads, now places the signal heads and detectors correctly on the duplicated links that are used as pedestrian areas. **(183049)**

✓ Motorcycles now use their indicators when changing lanes or taking turns. **(193568)**

- WMS service did not work: In certain combinations of WMS service and network projection, no background map could be displayed. This bug has been fixed. **(158760 | 16960)**

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 ⚠)**

Signal Control

- Controllers of type 'Fixed time (simple)' now correctly report the cycle second instead of the simulation second in the signal changes record. **(187616)**
- Controllers of types '2-Stage Controller', 'Pedestrian Crossing' and 'Railway Crossing' no longer incorrectly report a cycle time, since they have none. **(187800)**
- Fixed Time: The cycle second is now also reported correctly while no signal program is active in the daily signal program list. **(184121)**
- Fixed Time: There are no spurious signal changes in the first time step of a simulation anymore. **(187452)**
- Fixed Time: the initial cycle second is now computed correctly in case the simulation start time of the simulation is not midnight and daily signal program lists are used. **(184115 ⚠)**
- RBC: The signal sequence generated by RBC is no longer validated by Vissim since not all checks applied to RBC. This avoids incorrect warnings at simulation start. **(187916)**
- The value of the attribute 'tSigState' of signal groups is now computed consistently for all signal controller types and also updated each simulation time step, and not only each signal controller time step. **(187798)**

Vehicle Simulation

- In specific cases, vehicles at a crossing conflict incorrectly treated the conflict as a branching or merging conflict. This has been fixed. **(188281 ⚠)**

Viswalk

- An intermediate route location on an area that is used as a waiting area for an elevator group now always enforces immediate usage of an elevator of that group to reach the next route location. **(158708 | 16809 ⚠)**
- Area measurements with sections that have an additional level and which contain a PT stop will no longer consider alighting pedestrians. Sections with an additional level should only consider pedestrians on ramps that connect the two levels of the section. **(157658 | 13005 ⚠)**
- Detectors and conflict markers no longer recognize pedestrians on ramps above or below themselves. In addition, vehicles approaching conflicts with pedestrians will not consider pedestrians on ramps, that are above or below the conflict area, as approaching or blocking the conflict area. **(158402 | 15803)**
- Fixed an incorrect error message that pedestrians approaching a PT vehicle have no route, when the only route requires usage of an elevator. **(157582 | 12781)**
- For the computation of the pedestrian density on input areas, pedestrians on ramps above or below the input area are no longer considered. These pedestrians caused a too high density, which in turn could delay insertion of pedestrians due to too high densities on input areas. **(158403 | 15804 ⚠)**
- Pedestrian partial routing decisions on waiting areas of elevator groups no longer cause the simulation to abort in specific situations. **(157979 | 14140)**
- Pedestrians boarding a PT vehicle with doors on both sides no longer choose a boarding door on the far side of the vehicle in specific situations. **(174995 ⚠)**
- Pedestrians no longer incorrectly assume that they are on a flat ramp when changing their pedestrian type while they are crossing an inclined ramp. **(158849 | 17309 ⚠)**
- Pedestrians will no longer wait on ramps or stairs for the arrival of a PT vehicle. **(157872 | 13789)**
- Pedestrians with a given construction element are now always contained in the relation of that construction element to all pedestrians on that construction element. **(158139 | 14643)**
- The path choice of pedestrians now yields better results when choosing between elevators and ramps, especially if there are large areas in front of the elevator doors and the elevator is not located in the center of these areas. **(158709 | 16811 ⚠)**
- The simulation no longer crashes when pedestrians enter an area with a waiting time distribution, that is also a waiting area for an elevator group or a PT stop. The waiting time distribution will be ignored in these cases. **(158454 | 15955)**
- When evaluating formula filters for boarding volumes, the attribute values of pedestrians after they arrived at the PT waiting area are now used consistently. **(158621 | 16541 ⚠)**

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. **(185863)**
- ✓ Vissim no longer crashes if the connection to the license is lost for more than five seconds. **(188638)**
- ✓ Vissim no longer crashes when running a simulation while a network comparison window is open. **(176084)**
- ✓ Vissim no longer hangs at startup and shutdown if the Bing Maps server is not reachable. **(189381)**

⚠ Breaking Changes

Meso Simulation

- ⚠ Simulation results of meso simulations with micro sections can be different compared to previous versions. **(193534 ✓)**
- ⚠ Simulation results of meso simulations with micro sections can be different when compared to previous versions. **(189204 ✓)**

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 ✓)**

Signal Control

- ⚠ Fixed Time: In networks containing fixed time signal controllers with daily signal program lists, and if the start time of the simulation is not midnight, simulation results may differ to those of previous versions. **(184115 ✓)**

Vehicle Simulation

- ⚠ Due to the possibly changed behavior of vehicles at specific conflict areas, simulations results can differ to those of previous versions. **(188281 ✓)**
- ⚠ The simulation results of all vehicle simulations can differ to those of previous versions. **(158947 | 17651 ⊕)**

Viswalk

- ⚠ In networks containing PT stops where pedestrians can board PT vehicles on both sides, simulation results can differ to those of previous versions. **(174995 ✓)**
- ⚠ In networks containing PT stops with boarding volumes that have filter formulas, simulation results can differ to those of previous versions. **(158621 | 16541 ✓)**
- ⚠ In networks containing pedestrian route locations on areas that are used as waiting areas for elevator groups, the path choice of pedestrians between two route locations can differ to those of previous versions. **(158708 | 16809 ✓)**
- ⚠ In networks containing sections with an additional level which contain a PT stop, results of area measurements can differ to those of previous versions. **(157658 | 13005 ✓)**
- ⚠ In networks in which pedestrians can choose between elevators and ramps, the path choice of pedestrians between two consecutive route locations may change. **(158709 | 16811 ✓)**
- ⚠ Simulation results can differ to those of previous versions when changing a pedestrian's type while crossing inclined ramps. **(158849 | 17309 ✓)**
- ⚠ Simulation results in networks containing ramps above or below areas with pedestrian input can differ to those of previous versions. **(158403 | 15804 ✓)**

2024.00-00 [264195]   2023-07-31

⊕ New Features and Changes

COM Interface

- ⊕ A few parameters in the COM interface did not follow the "Camel Case" naming convention. This is now fixed. **(159016 | 17806 ⚠)**

COM-API

- ⊕ Reset Python import path (sys.path) before script execution: The Python import path is now set to the following paths before each script execution: the paths defined by the user (if any), the Add-in paths, the paths specified by Python. **(164956 ⚠)**

Cloud

⊕ Opening calculation results from the MRU list: When opening a cloud model from the MRU list that has a corresponding calculation result, there is now an option to also open the calculation result. **(183172)**

Data Model

⊕ All network objects now have a relation to the network, and the network has relations to all network objects. This enables aggregations over all network objects of an arbitrary type to be used in formulas. See the document "Vissim 2024 - What's new.pdf" for details. **(156720 | 9241)**

File Handling

⊕ When trying to save a network that was created with an older Vissim version, the user must now confirm to overwrite the network file (*.inpx). Overwriting the file will update the file version, which would prevent older Vissim versions from opening the file. This confirmation can be disabled in the user preferences. **(131569 | 16892)**

Formulas

⊕ The syntax of the following functions was renamed to improve readability of formulas: 'IDIV' to 'DIV', 'STRTONUM' to 'TEXTTONUM' and 'NUMTOSTR' to 'NUMTOTEXT'. For backwards compatibility, all existing formulas stay valid and will automatically be redirected to the renamed functions when the formula is evaluated. **(132171 | 17756)**

Graphics

⊕ It is now possible to create pavement markings with user defined images. These will be displayed in 2D and 3D mode. See the document "Vissim 2024 - What's new.pdf" for details. **(156374 | 5707)**

⊕ Several pavement marking images (*.PNG} were added to the texture library in Vissim. These were prepared to be used with the new functionality "pavement markings with user-defined images" and are available at \Textures\Pavement Markings (the default directory for such pavement markings). **(187310)**

⊕ The library of traffic sign images (*.PNG}
was updated and enhanced. They can be used for example on traffic signs mounted to 3D traffic signals. They are available at \Textures\Signs. **(187311)**

⊕ Updated library for coordinate transformations: The library used for coordinate transformations has been updated. **(185280)**

Network Editor

⊕ It is now possible to configure and display labels in the network editor for the following network objects: pedestrian and vehicle routes, pedestrian route locations, lanes, conflict markers and elevator doors. See the document "Vissim 2024 - What's new.pdf" for details. **(156517 | 7918)**

⊕ The action 'Recalculate Spline' in the context menu of links now yields better results for z-offset of the link points. **(157781 | 13468)**

⊕ The lines connecting the route locations of pedestrian routes now show the direction of the route via small arrows. See the document "Vissim 2024 - What's new.pdf" for details. **(158158 | 14739)**

⊕ The user experience of editing the status of conflict areas in the network editor has been improved. The two links of a conflict are now labelled 'A' and 'B' instead of '1' and '2' to not confuse these numbers with the link attribute 'Number'. The labels for the links are now shown in the network editor when selecting a conflict area. In addition, the link direction is now depicted for each lane conflict of a selected conflict area. See the document "Vissim 2024 - What's new.pdf" for details. **(158727 | 16859)**

⊕ When adding and dragging intermediate points of vehicle routes, now all selected routes crossing the intermediate point will be edited simultaneously. See the document "Vissim 2024 - What's new.pdf" for details. **(156852 | 9984)**

OpenDRIVE Import

⊕ Vissim is now able to import more projections from the 'geoReference' entry in an OpenDRIVE file (.xodr) successfully. **(171621)**

Scenario Management

⊕ When saving the base network or a scenario, a backup of the ".vissimpdb" file will be created in the "Backups" subfolder carrying the file extension ".SQLITE_backup". **(158780 | 17021)**

Vehicle Simulation

- ⊕ The computation time for simulation could be improved by up to 20% in general. For networks with many reverse parking lots or mesoscopic simulation, the computation time was reduced by 50%. **(159035 | 17831 ❗)**
- ⊕ The driving behavior attribute 'Advanced merging' is now always active and cannot be deactivated anymore. **(158502 | 16095 ❗)**
- ⊕ Vehicles approaching conflict areas with 'Avoid Blocking' enabled now better assess if their front vehicle will have to stop inside or after the conflict area. This prevents needless stops in front of the conflict area. **(159134 | 17943 ❗)**

Viswalk

- ⊕ Labels for pedestrians can now be setup in the graphics parameters for 'Pedestrians In Network'. See the document "Vissim 2024 - What's new.pdf" for details. **(157748 | 13393)**
- ⊕ Pedestrians at conflict areas will now anticipate routes of approaching vehicles if the value of the corresponding attribute is set to 100%. Otherwise, all pedestrians will not anticipate routes of approaching vehicles. The anticipation of routes cannot be enabled for individual pedestrians. **(166572 ❗)**
- ⊕ Pedestrians at the head of a central service point selection queue now interpret the time distribution of the partial routing decision area as a reaction time to notice a free desk. This means that the pedestrians will not immediately proceed to a free service point immediately, but instead, will dwell for an additional duration at the queue head and then continue to proceed to the free desk. **(177916 ❗)**
- ⊕ Pedestrians inserted into the network will respect waiting time distributions on their input area, causing them to dwell before walking to their first route location. **(156781 | 9638 ❗)**
- ⊕ The default placement of labels of various network objects like pedestrian inputs, pedestrian routing decisions or pedestrian attribute decisions, has been improved to prevent the labels from blocking the selection of those network objects in the network editor window. **(176511)**

Workspace

- ⊕ Vissim now has an automatic backup feature that can be activated and configured in the user settings. When activated, Vissim saves the network and layout at regular time intervals if any changes were made. See the document "Vissim 2024 - What's new.pdf" for details. **(156017 | 350)**

❗ Breaking Changes

COM Interface

- ❗ The COM function 'RemovePedestrian' now only marks pedestrians for removal instead of removing them immediately. **(159101 | 17908)**
- ❗ When using the COM interface with named parameters, e.g., in Python, some Parameter names in user scripts will have to be adjusted accordingly. **(159016 | 17806 ⊕)**

Vehicle Simulation

- ❗ In all networks, simulation results can differ to those of previous versions. **(159035 | 17831 ⊕)**
- ❗ In networks containing conflict areas with 'Avoid Blocking' enabled, simulation results can differ to those of previous versions. **(159134 | 17943 ⊕)**
- ❗ In networks containing driving behaviors that have 'advanced merging' disabled, vehicle behavior and simulation results will differ to those of previous versions. **(158502 | 16095 ⊕)**

Viswalk

- ❗ In networks containing pedestrian vehicle conflict areas with the attribute 'Anticipate routes' set to a value of 100%, the behavior of pedestrians at that conflict area and the simulation results will change. **(166572 ⊕)**
- ❗ In networks containing service point selections with central queues, the behavior of pedestrians and the simulations results will differ to those of previous versions. **(177916 ⊕)**
- ❗ In networks with time distribution on areas that also have a pedestrian input, the behavior of pedestrians and the simulation results will differ to those of previous versions. **(156781 | 9638 ⊕)**

COM-API

- ❗ Reset Python import path (sys.path) before script execution: The Python import path is now set to the following paths before each script execution: the paths defined by the user (if any), the Add-in paths, the paths specified by Python. Because resetting the Python import path was not done consistently so far, the behavior may change in models where the Python import path has been manipulated. **(164956 ⊕)**