PTV Vissim & Viswalk 2021
Release Notes

Last modified: 2022-07-28

2021.00-13 [97611]

2022-07-27

⊕ New Features and Changes

Dialogs

- ⊕ License management improvements: The settings for license servers and license containers have been moved from the 'License management' dialog to a separate settings dialog. The new dialog provides extended functions, especially for containers. **(17500)**

Installation

- ⊕ The CodeMeter Runtime deployed with PTV Vissim has been updated to CodeMeter 7.40b. **(17168)**

✓ Fixed Bugs

Dialogs

- ✓ The dialog for the dynamic assignment cost coefficients of vehicle types now displays the correct unit for the distance, which is always meters. The cost coefficient was always interpreted as costs per meter. **(17495)**

Dynamic Assignment

- ✓ The value of the attribute "Surcharge 2" of links is now also applied correctly during path choice if the link is not part of the first edge of a path. **(17261 🔴)**

Evaluations

- ✓ An incorrect modeling of evaluation nodes can no longer cause database errors when running multiple simulation runs. **(16317)**

External Programs

- ✓ The internally used programming library zlib was updated to version 1.2.12 to close a security vulnerability. **(17295)**

File Handling

- ✓ Opening the file selection dialog can no longer cause a crash on computers with Windows 11 on which the desktop is synchronized with OneDrive (or presumably other cloud services). **(17138)**

Lists

- ✓ Changing the simulation duration can no longer cause a crash when lists with certain attributes are displayed at the same time. **(17044)**

Network Editor

- ✓ The status bar will not be cropped anymore when using high DPI displays or a large scaling factor in the windows display settings. **(16793)**

Public Transport

- ✓ It is now possible to create new time intervals for partial PT routes even if the network contains partial PT routing decisions where the attribute "Route choice method" is set to "Formula". **(17301)**

Scenario Management

- ✅ Active list filters of edges do not cause crashes anymore when changing scenarios. **(17160)**
- ✅ Changes to the attribute "Uses modification" of a scenario are now correctly saved in the scenario management project. **(17032)**
- ✅ It is now possible to open an old scenario management project which was created by versions before Vissim 2020 even if the file path to the project file contains a semicolon. **(17169)**
- ✅ Read additionally of networks not under scenario management into scenarios will not prevent subsequent loading of the scenario anymore. The same applies to model transfer files generated from network not under scenario management. **(17104)**
- ✅ Vissim no longer sporadically crashes when loading a scenario containing conflict areas with links that are pedestrian areas. **(17407)**

Signal Control

- ✅ VAP:
  A crash was fixed caused by supply files with many nested expressions and activated trace mode. **(17107)**
- ✅ VisVAP:
  It is again possible to open .vv files in VisVAP directly from the Windows explorer. This file type is again correctly associated with VisVAP after a fresh installation of VisVAP. **(16976)**

Viswalk

- ✅ Fixed an issue that prevented the BIM import (*.ifc) from starting in certain cases. **(17529)**

⚠ Breaking Changes

Dynamic Assignment

- ⚠ If the attribute "Surcharge 2" of a link is non-zero, the path choice of vehicles can be different when compared to previous versions. **(17261 ✅)**

Viswalk

- ⚠ Known problem: Formula routes using aggregated attributes over pedestrians on an area can cause a crash during a simulation run using multiple cores. It is recommended to run such networks only with 1 core. **(13455 ✅)**

2021.00-12 [96828]   2021-12-15

⊕ New Features and Changes

DriverModel.DLL Interface

- ⊕ The handling of user defined attributes is faster now. **(16734)**

Installation

- ⊕ The CodeMeter Runtime deployed with PTV Vissim has been updated to CodeMeter 7.30a. **(16702)**

Signal Control

- ⊕ The setup package of the controller Econolite ASC/3 has been updated to version 1.5.1.6. **(16755)**
- ⊕ Vehicles with the active item "SC Communication" in their attribute "Equipment" which approach a signal head of a controller having asked for V2I data on their route now also send the first MAPlane (UDA of the lane with type "int") downstream of the signal head to the controller which is different from the MAPlane of their current lane. If there is no MAPlane value on the route within 100 m downstream of the signal head, the value zero is passed to the controller. **(16918)**

Viswalk

- ⊕ Fire Events now support .q-files that were created with FDS starting from version 6.7.6 and which are no longer required to contain leading zeros in the file name. **(16667)**

Workspace

+ The new global keyboard shortcut Ctrl+L swaps the main language and the fallback language in the user preferences. **(16894)**

✓ Fixed Bugs

Data Model

✓ The default network was changed, so that the driving behavior attribute "Minimum longitudinal speed for lateral movement" now has a value of 1.0 km/h instead of 3.6 km/h for all driving behaviors when creating a new network. **(16856)**

Driving Simulator Interface

✓ Simulator vehicles can now find links on levels with a non-zero z-coordinate. **(16681)**

File Handling

✓ Loading a network which contains references to files on network shares that are not available cannot cause a crash anymore. **(16583)**

Formulas

✓ Converting strings to numbers with the function StrToNum previously ignored decimals when the decimal separator was different from a point in the system settings. Now, the function only accepts digits and a dot as a decimal separator as input. Spaces at the beginning and the end of the string, as well as other non-numeric characters (except +,-, e/E), are invalid. Invalid inputs are interpreted as an error and result in an empty value. Before, it was possible that invalid parts of the input were silently discarded. **(16766 🛑)**

Graphics

✓ A wrongly configured color scheme in the graphics parameters of nodes can no longer cause a crash at the start of the simulation. **(16858)**

✓ Background graphics in the DWG file format cannot cause crashes anymore. **(16713)**

Public Transport

✓ Vissim no longer crashes when a pedestrian enters an area which is configured both as a waiting area for public transport and as a queue. **(16747)**

Simulation

✓ Errors which prevented the start of a simulation are now always reported correctly and can no longer crash Vissim when trying to start the simulation again. **(16728)**

Test Function

✓ Vissim no longer crashes when using the Test function in networks with hybrid simulations or pedestrians. **(16891)**

User-Defined Attributes

✓ Reading networks with many formulas in user-defined attributes is faster now. **(16817)**

🛑 Breaking Changes

Formulas

🛑 Formulas containing the function StrToNum now lead to different results when they are applied to strings that are now invalid. **(16766 ✓)**

2021.00-11 [96542]

✓ Fixed Bugs

DriverModel.DLL Interface

- Searches for signal heads (DRIVER_DATA_SIGNAL_), reduced speed areas (DRIVER_DATA_SPEED_LIMIT_) and priority rules (DRIVER_DATA_PRIO_RULE_) are no longer stopped early after the first connector. **(16533)**

Driving Simulator Interface

- The attribute Z_Position of vehicles is now also calculated correctly for vehicles on connectors between links on levels of different height. **(16616)**

Evaluations

- The delay for a vehicle driving backwards is now always zero. **(16475 ⊖)**

Graphics

- Transparency of background images now is also supported when using the 3D drawing option "Tiles". **(16514)**

Presentation

- The highlighting of selected objects is no longer visible in 2D video recordings. Moreover, vehicle labels are now recorded even in quick mode. **(16463)**

Vehicle Simulation

- Merging conflict areas can never cause a vehicle to react to itself anymore. **(16447 ⊖)**

Viswalk

- Pedestrians can no longer walk through obstacles which intersect only in an individual points. **(16394 ⊖)**
- The pedestrian simulation now correctly supports "Or signal groups" of signal heads. **(16543)**
- Vissim no longer crashes if the duration between the last alighted pedestrian and the departure of the PT vehicle (i.e. the sum of the attributes "VehicleType\DoorClosDur", "PTLineStop\DoorLockDurBefDep" and "PTLineStop\DoorClosDel") is smaller than one time step. PT vehicles now wait for all pedestrians to alight before they depart. **(16342)**

Workspace

- Changing the network editor layout when showing a simulation with a reduced screen update rate does no longer show incorrect shadings inside the network objects sidebar. **(16490)**
- Improved the performance of editing large matrices. **(10939)**
- New lists are now opened in the last active list window. **(16315)**

⊕ Breaking Changes

Evaluations

- Networks with vehicles driving backwards can have different delay results compared with previous versions. **(16475)**

Vehicle Simulation

- Networks with merging conflict areas downstream of splitting and then reconnecting link sequences can have different results compared with previous versions. **(16447 ⊖)**

Viswalk

- Networks with obstacles can have different results compared with previous versions. **(16394 ⊖)**

2021.00-10   [96319]   2021-08-19

⊖ Fixed Bugs

DriverModel.DLL Interface

- A bug has been fixed which could cause a crash when determining values for DRIVER_DATA_CURRENT_LANE_POLY_* for a specific network geometry. **(16462)**

Driving Simulator Interface

- ✅ Values of Orient_Heading outside of [0 .. 2*Pi] are handled correctly now, preventing vehicles with such values from being set on the wrong overlapping link. **(16452 ⚠️)**

Graphics

- ✅ An invalid reference point cannot cause the loading of background map tiles to wait indefinitely with open dialog "Loading Background Map". **(14911)**

Vehicle Simulation

- ✅ Active link evaluation on a link where a vehicle changes its direction after parking out in reverse cannot cause the simulation to crash due to excessive memory usage anymore. **(16461 ⚠️)**
- ✅ If there are multiple parking lot routes to the same parking lot with parking out in reverse, coming across different connectors from the same direction, a vehicle could see itself as obstacle and stop there forever. This problem has been solved. **(16325 ⚠️)**
- ✅ The speed and acceleration values for vehicles inside a platoon are now interpolated between the leading vehicle of the platoon and its last vehicle. (These values are not alwas consistent with the actual passed distance during a time step.) This prevents strange behavior due to large speed differences when platoons are split up. **(16472 ⚠️)**

Viswalk

- ✅ Pedestrians who don't ever reach the area of a queue they aim at (because they are rerouted by a partial routing decision) are not counted as being in that queue anymore. **(16398 ⚠️)**
- ✅ Setting the individual desired speed factor for a pedestrian to zero cannot cause them to disappear unexpectedly after a few seconds anymore. **(15907)**

⚠️ Breaking Changes

Driving Simulator Interface

- ⚠️ Values of Orient_Heading outside of [0 .. 2*Pi] can cause simulation results to differ from those of previous versions. **(16452 ✅)**

Vehicle Simulation

- ⚠️ If there are multiple parking lot routes to the same parking lot with parking out in reverse, coming across different connectors from the same direction, simulation results can differ from those of previous versions. **(16325 ✅)**
- ⚠️ Link evaluation results can differ from those of previous versions in networks with parking out in reverse. **(16461 ✅)**
- ⚠️ Simulation results of networks using platooning can differ from those of previous versions. **(16472 ✅)**

Viswalk

- ⚠️ Queue results in the area evaluation can differ from those of previous versions. **(16398 ✅)**

2021.00-09 [96002]

➕ New Features and Changes

Installation

- ➕ The CodeMeter Runtime deployed with PTV Vissim has been updated to CodeMeter 7.21a. **(16346)**

Network Editor

- ➕ The tooltip when hovering over a spline point of a link shows the link number now. **(16115)**

Viswalk

- ➕ The minimum spacing for PT waiting areas or elevator waiting areas can now also be set in the dialog. **(15653)**

✅ Fixed Bugs

Dynamic Assignment

- ✅ Closed connectors upstream of an origin parking lot inside a node or downstream of a destination parking lot inside a node cannot prevent a path between these two parking lots to be used anymore by vehicles of a vehicle class mentioned in the closure. **(16294 ❗)**

Graphics

- ✅ Attribute modifications for pedestrians and vehicles as well as attribute decisions don't cause static network objects (including background images) to be redrawn in the network editor anymore. Simulations with attribute modifications and/or attribute decisions and passive quick mode are now much faster. **(16239)**

Signal Control

- ✅ 3D signals cannot cause the signal optimization to crash anymore. **(16085)**

Vehicle Simulation

- ✅ As long as the vehicle attribute "desired lane" is equal to the index of the current lane of the vehicle (1 = rightmost lane in driving direction), the vehicle cannot leave that lane anymore. **(16269 ❗)**
- ✅ The desired lateral position "any" cannot cause a crash anymore for a platooning vehicle approaching the emergency stop position of a connector. **(16371)**

Viswalk

- ✅ The size of ramps is now included in the calculation of the density and flow attributes in the pedestrian network performance evaluation. **(15917 ❗)**

Workspace

- ✅ A user-defined layout file with an open node results list cannot cause the program to hang anymore during the startup (showing "initializing evaluation graph"). **(16341)**

❗ Breaking Changes

Dynamic Assignment

- ❗ Closed connectors upstream of an origin parking lot inside a node or downstream of a destination parking lot inside a node cannot prevent a path between these two parking lots to be used anymore by vehicles of a vehicle class mentioned in the closure. **(16294 ✅)**

Vehicle Simulation

- ❗ Setting the vehicle attribute "desired lane" can cause simulation results to differ from previous versions. **(16269 ✅)**

Viswalk

- ❗ The density and flow attributes in the pedestrian network performance evaluation can have values differing from those in simulation runs with previous versions if there are ramps in the network. **(15917 ✅)**

2021.00-08 [95833]   2021-05-24

⊕ New Features and Changes

Graphics

- ⊕ Mipmapping (anisotropic filtering) is now also applied to background maps in the 3D view. **(16160)**

Installation

- ⊕ The CodeMeter Runtime deployed with PTV Vissim has been updated to CodeMeter 7.20a. **(16129)**

License Management

⊕ This has been improved in many ways.
PTV Vissim will automatically notify you when a license update is available, and you can install it with one click. License activation, update, and deactivation can now be triggered directly in the dialog, and also license borrowing has been made simpler and more robust. Please see the new online help for further details: https://cgi.ptvgroup.com/vision-help/LicenseMgt_ENG/Content/0_TitelCopyright/Index.htm.

You can use the new license management in two ways:
1. Within PTV Vissim from this service pack.
2. With the PTV License Manager from our download area. As an added advantage, this stand-alone tool can be used independently of a Vissim installation, for example on a license server. It also works for previous Vissim versions. **(16259)**

Vehicle Simulation

⊕ Vehicles have the new calculated attribute "Gradient" which shows the relevant gradient for the maximum acceleration calculation of the next time step. The value is calculated from the current z-coordinates of the vehicle's front end and rear end if the network setting is "Link gradient is based on Z-Coordinates", else it is equal to the value of the attribute "Gradient" of the link at the vehicle's front end. **(16176 ⓘ)**

✔ Fixed Bugs

Data Model

✔ The short names of values for the subattribute time interval shown in attribute selection and list column headers are now always <FromTime>-<ToTime>. This reduces confusion in the formula editor where the internal index of the interval (starting at 1) needs to be used inside the textual formula. **(15795)**

Dialogs

✔ The Split Link dialog uses the globally selected length unit now (instead of always meters). **(16137)**

Dynamic Assignment

✔ Additive reading of a matrix now also reads cells with value zero and overwrites the respective destination cells if conflict handling is set to "overwrite object". **(16068)**

Graphics

✔ Background maps are now always shown in screenshots in high resolution (created via click on the camera icon in the toolbar). **(15632)**
✔ The predefined color schemes for pedestrian areas and ramps are now also available for grid cells. **(16098)**

Installation

✔ Vissim doesn't crash anymore during startup with the Windows language set to "Chinese (Simplified , China)". **(16183)**

Vehicle Simulation

✔ A vehicle starting from its emergency stop position of a connector ignores the desired safety distance now for the lane change to the necessary target lane. In some cases, this can prevent the vehicle from missing the connector and leaving the network. **(15990 ⓘ)**
✔ A vehicle which is overtaken by another vehicle on the same lane but which may not overtake that vehicle on that side itself doesn't get a sudden scare anymore making it move laterally as soon as it sees the front end of that other vehicle. **(16002 ⓘ)**

Viswalk

✔ Dynamic partial routes depending on density don't cause the simulation run to crash anymore if one of the routes doesn't have any areas assigned. **(15975)**
✔ File / Import / BIM (*.ifc) doesn't fail anymore on some computers with a correct but unhelpful message about Codemeter protection. **(16201)**

ⓘ Breaking Changes

Vehicle Simulation

- ⚠ Simulation results in networks where vehicle can overtake on the same lane can differ from those of previous versions. **(16002 ✅)**
- ⚠ Simulation results in networks with "Link gradient is based on Z-Coordinates" can differ from those of previous versions. **(16176 ⊕)**
- ⚠ Simulation runs with vehicles stopping at an emergency stop position of a connector can have results differing from those of previous versions. **(15990 ✅)**

2021.00-07 [95499]   2021-04-12

⊕ New Features and Changes

Meso Simulation

- ⊕ If the lane change distance of a downstream connector reaches back into a meso edge, vehicles selecting a lane on that meso edge (in the previous meso node) consider already their lane preference on all meso edges downstream up to that connector.
  Connectors in micro sections have no effect on meso lane selection, and the meso vehicles don't look through micro sections.
  If the lane changes happen too early, the lane change distance of the connector(s) can always be set to the emergency stop distance plus 5 meters in order to get almost always the same meso behavior as in Vissim 21.00-06. **(15879 ⚠)**

Signal Control

- ⊕ V2I (Vehicle to Infrastructure) data is sent to downstream signal heads only from vehicles of vehicle types which have the new option "SC Communication" active in their attribute "Equipment". **(16037)**

Vehicle Simulation

- ⊕ Extended options for the creation of "accidents" or "critical situations":
  * The driving behavior attribute "Speed misestimate distribution" has been renamed to u"";Speed misestimate distribution (default)u"";. Additionally, one attribute u"";Speed misestimate distribution (x)u""; is available for each vehicle class number x.
  If the driving behavior used by a vehicle references a specific speed misestimate distribution for a vehicle class containing the vehicle type of an observed vehicle, that distribution is used. If not, the default speed misestimate distribution (if existing) is used.
  A vehicle using a speed misestimate distribution misestimates the current speed of all other vehicles for the purpose of gap calculation, at priority rules, conflict areas, during lane changes (new since version 2021 SP 07) and for overtaking in the opposing lane. The speed of each considered vehicle is multiplied with the same factor drawn from that distribution. The fractile for the random value is constant for each individual vehicle during a simulation run.
  At conflict areas, vehicles using a factor other than 1.0 will also ignore the current and future acceleration and deceleration of surrounding vehicles, taking into account only their current speed, multiplied by the factor.
  * The new attribute u"";Conflict areas count as interaction objectsu""; can be activated in a driving behavior in order to allow distraction for vehicles using that driving behavior to include ignoring of conflict areas. If the attribute value is u"";trueu"";, conflict areas are counted for the maximum number of interaction objects set in the driving behavior. A COM script can change the vehicle type of a vehicle during a simulation run in order to make it use a different driving behavior, with a lower number of interaction objects including conflict areas, so that vehicle might ignore other vehicles or pedestrians if these conflicts are downstream of conflict areas, e.g. for interaction with the opposing through traffic. (If the attribute is set to "false", each vehicle always sees at least all conflict areas up to the first downstream vehicle or within the maximum lookahead distance if this doesn't contain a vehicle.)
  * Vehicles have the new attribute u"";Remaining distraction durationu"";. While a driver is distracted (caused by a driving behavior with active distraction parameters), this attribute shows for how many simulation seconds this state will continue. **(14102)**

Viswalk

- ⊕ New result attributes "Number of stops" and "Stop time (total)" for area evaluations, areas and ramps. They are calculated the same way as for the pedestrian network performance evaluation, i.e. a stop starts when a pedestrian's speed falls below 0.2 m/s, and the stop ends when their speed increases above 0.2 m/s. **(15658)**

✅ Fixed Bugs

File Handling

- ✅ *.err filenames with multiple dots are not wrongly shortened anymore upon writing. (Previously, the part between the second to last and last dot was removed.) **(16169)**
- ✅ *.inpx filenames with multiple dots are not wrongly shortened anymore upon saving. (Previously, the part between the second to last and last dot was removed.) **(16052)**

Graphics

- ✅ In the turn value visualization for nodes, the occasional incorrect swap of the positions of the incoming and outgoing turn of a node leg has been fixed. **(15806)**

Workspace

- ✅ A memory leak during the loading of a layout file has been fixed. **(15850)**

⛔ Breaking Changes

Meso Simulation

- ⛔ Lane changes can cause different simulation results compared with previous versions. **(15879)**

2021.00-06   [95333]

<div align="right">

2021-03-12

</div>

⊕ New Features and Changes

Documentation

- ⊕ New French online help and PDF manual (state of Vissim 2020). **(16017)**

Meso Simulation

- ⊕ New node attribute "Meso penalty (merging vehicles)". This is a value in seconds which is added to the minimum meso time gap between two vehicles on the same outgoing lane which are coming from different incoming lanes or links. This allows to calibrate the capacity drop at merging areas. **(15848 ⛔)**

Signal Control

- ⊕ The fixed time controller (Vissig) also includes the Swiss signal sequence red - red/amber - flashing amber - amber - red now. **(15912)**

Vehicle Simulation

- ⊕ New driving behavior attribute "Jerk limitation" (default: true). This can be used to switch off the automatic limitation of the change of the acceleration of a vehicle from one time step to the next timestep. Active jerk limitation reduces the change of acceleration within one timestep (at n time steps per simulation second) to 2/n of the desired acceleration change of the vehicle (if that is more than 0.2 m/su'²';) **(15949)**

Viswalk

- ⊕ New pedestrian attribute "Dwell time". This contains the remaining waiting time if a pedestrian is currently waiting at the head of a queue or on an area with a waiting time distribution, and it is empty in all other cases (including when waiting on a waiting area for PT or an elevator). As long as the value is greater than zero it can be modified from a COM script or attribute modification. If it is set to zero, the pedestrian can move in the next time step. **(14153)**
- ⊕ The default value for the attribute "Maximum speed" for detectors is now 1.0 km/h (instead of 3.6 km/h). This is relevant only on links used as pedestrian areas and the lower value prevents pedestrians walking slowly but not extremely slowly (e.g. coming from the other side of the crosswalk) from causing another call on the detector. **(15932)**

✅ Fixed Bugs

ANM Import

- ✅ A memory leak has been fixed. **(15998)**

- The z-Coordinates of spline points of connectors with different height at start and end which are created inside nodes are now correctly linear from start to end. **(15960)**

Driving Simulator Interface

- The vehicle attribute "orient_pitch" is now calculated from the visualized pitch of the vehicle (z-coordinates of the front end and of the rear end) instead of the gradient of the link segment at the vehicle's front end. **(15958)**

Evaluations

- Writing the vehicle or pedestrian record to a database (SQLite) is much faster now. **(15770)**

Graphics

- Credentials for background maps: The Windows authentication required to fetch background maps was not passed correctly. Therefore, when using a proxy that requires credentials, background maps could not be displayed. **(15946)**
- In the 3D view from driver's perspective, the vertical viewing angle is now calculated from the actual pitch of the vehicle (z-coordinates of the front end and of the rear end) instead of the gradient of the link segment at the vehicle's front end. **(15985)**

Public Transport

- A vehicle on a public transport line cannot miss a PT stop anymore because of insufficient maximum deceleration. If required, the maximum deceleration of the vehicle type is exceeded in the last time step before the standstill. **(14281 ❗)**
- Vehicles can't start their dwell time anymore with their front end still outside of the PT stop unless their distance from the end of the PT stop is at most the vehicle length plus 1 m, or 2 m in total, whichever is larger. (Previously, all locations within 6 m of the end of the stop could be used.) **(16013 ❗)**

Signal Control

- A bug in Microsoft .NET which could cause a simulation to hang during the initialization of a signal controller is now circumvented. **(15857)**

Vehicle Simulation

- A vehicle starting a lane change in the same time step when it is to be removed from the network because of the maximum waiting time for the lane change cannot cause the simulation to crash anymore. **(15898)**

❗ Breaking Changes

Meso Simulation

- Simulation results can differ from previous versions if there are driving behaviors with different meso reaction times. **(15848 ➕)**

Public Transport

- Simulation results in networks with public transport can differ from previous versions. **(14281 ✅)**
- Vehicles may start their dwell time in a PT stop at a different position than in previous versions. **(16013 ✅)**

Vehicle Simulation

- A platoon splitting into two platoons can cause simulation results to differ from previous versions. **(14282 ✅)**

2021.00-05 [94672]   2021-02-11

✅ Fixed Bugs

Data Model

- The attribute "x" of a data point of a distance distribution has the type "short distance" now, so it is automatically displayed in the currently selected unit for short distances (ft or m) in the child list of the list of distance distributions, exactly as the lower and upper bound of the distribution itself. **(15798)**

Graphics

- A problem causing a crash upon the start of a simulation run with multiple open chart windows for movements (inside nodes) has been fixed. **(15875)**

Meso Simulation

- The values for latent demand and latent delay in the vehicle network performance evaluation are correct now even if results are collected for individual vehicle classes (evaluation configuration). **(15828 ⊕)**
- Vehicles moving from a meso section to a micro section don't have incorrect delay values anymore. **(15698 ⊕)**

Signal Control

- Signal states of a controller of an internal SC type can now also be overridden from COM scripts and attribute modifications. **(15866)**
- V2I data are calculated and sent only from the position of a vehicle at the end of the time step now. **(15735 ⊕)**

Simulation

- A continuously decreasing simulation speed during the execution of a multi-run has been fixed. **(15663)**

Viswalk

- Ramp evaluations ignore pedestrians passing under or above the ramp correctly now. Area evaluations also don't count pedestrians on ramps anymore. **(15616 ⊕)**
- The calculation of StopsAvg and StopTmAvg in the pedestrian network performance evaluation has been fixed. **(15642 ⊕)**
- The pedestrian network performance evaluation has correct values now for the attribute "Normalized Speed (average)" instead of just showing the same value as "Speed (average)". **(15893 ⊕)**

⊕ Breaking Changes

Meso Simulation

- ⊕ The values for latent demand and latent delay in the vehicle network performance evaluation can be different from those of previous versions if results are collected for individual vehicle classes. **(15828 ⊘)**
- ⊕ Vehicle delay results in hybrid simulations can differ from previous versions. **(15698)**

Signal Control

- ⊕ V2I data sent to the controller DLL can be different from previous versions. **(15735 ⊘)**

Viswalk

- ⊕ Ramp and area evaluation results can differ from previous versions. **(15616 ⊘)**
- ⊕ The pedestrian network performance evaluation can show different values for the attribute "Normalized Speed (average)" compared with previous versions. **(15893 ⊘)**
- ⊕ The values for StopsAvg and StopTmAvg in the pedestrian network performance evaluation can differ from previous versions. **(15642 ⊘)**

2021.00-04 [93532]

2020-12-14

⊕ New Features and Changes

Viswalk

- ⊕ It is now possible to define a minimum distance for pedestrians waiting on a public transport platform. This can be done with the new attribute 'Waiting area minimum spacing' on areas. **(15588)**

⊘ Fixed Bugs

Evaluations

- An issue was fixed in the link segment evaluation with activated platooning. **(15627 ⊕)**

Meso Simulation

- ✅ The link segment evaluation for meso simulation was re-engineered. The new calculation is more precise, especially for low volumes. This also fixes a specific issue with unrealistically high speeds. Also, vehicle delays on zero length meso edges are now correctly aggregated to the respective link segment **(11533 ⛔)**

Vehicle Simulation

- ✅ A crash was fixed in vehicle simulation in connection with public transport. This crash only occured, when a public transport vehicle, where the capacity was exceeded, stopped at a stop without a boarding area, among other conditions. **(15652)**
- ✅ A crash was fixed in vehicle simulation with platooning. This only occured, when the platoon leader wanted to make an impossible lane change and was removed from the network. **(15625)**
- ✅ An issue was fixed in vehicle simulation with platooning. This issue occurred in networks where connectors left a link at the identical position. In this case the dispersal of the platoon did not work correctly. **(15614 ⛔)**

Workspace

- ✅ The simulation time setting can again be toggled by double clicking, not only with the menu entries. **(15696)**

⛔ Breaking Changes

Evaluations

- ⛔ The results of the link segment evaluation might differ when platooning is activated. **(15627)**

Meso Simulation

- ⛔ Results of the link segment evaluation will be different. **(11533 ✅)**

Vehicle Simulation

- ⛔ Results will differ in all networks, where platooning is activated and there exist connectors that leave a link at identical positions. **(15614 ✅)**

2021.00-03 [92879]

➕ New Features and Changes

Data Model

- ➕ 3D information signs can now also be assigned to static 3D objects. **(15590)**

Dialogs

- ➕ Duplicate & rename in the attribute selection dialog: The list of selected attributes on the right side now allows to duplicate an attribute through the context menu. Furthermore, the attribute ID can be edited to change the selection. Both together make it very easy to add a slightly different complex attribute (e.g. an indirect attribute with an aggregation function or an attribute with subattributes). If the value type of the attribute is not changed in the process, the formatting settings are retained when the attribute ID is changed. **(15549)**

✅ Fixed Bugs

ANM Import

- ✅ The adaptive import could crash if the option "Delete omitted objects" was checked. This problem has been fixed. **(15639)**

Network Editor

- ✅ In the special mode "Create car park", [Ctrl+] right drag can be used now as well as left drag to create parking lots adjacent to an existing link. **(15654)**

Vehicle Simulation

- ✅ A vehicle checking for the possibility of a necessary lane change uses now the desired speed of other vehicles from the previous time step, so this calculation is always reproducible even if the two vehicles are on different links and the simulation is multi-threaded. **(15535 ❗)**
- ✅ Parking out in reverse to a multi-lane link could cause Vissim to hang. This problem has been fixed but collisions in such a situation are still possible because the automatic yielding of vehicles to each other during parking out is not yet implemented in this case. **(15572 ❗)**
- ✅ When using a driving behavior without slow lane rule (or when the leading vehicle's speed is below 60 km/h so slow lane rule is ignored), vehicles now consider their current maximum speed (defined by the maximum acceleration function and the current gradient) when deciding if to change lanes in order to overtake a slow vehicle. This is especially relevant for trucks on uphill slopes which now don't start hopeless overtaking attempts anymore. **(15611 ❗)**

Viswalk

- ✅ A problem of missing cells on ramps in the grid cell evaluation has been fixed. **(15613 ❗)**
- ✅ Multiple pedestrians entering a waiting queue could cause a multi-threaded simulation run to be non-reproducible. This problem has been fixed. **(15575 ❗)**
- ✅ Overlapping future pedestrian times on conflict areas could be calculated wrongly and not reproducibly. This problem has been fixed. **(15601 ❗)**
- ✅ Pedestrians cannot "jump over the fence" anymore at U-turns of stairs with a very small gap between the two directions. **(15594 ❗)**

❗ Breaking Changes

Vehicle Simulation

- ❗ A change of the desired speed of a vehicle can cause simulation results to differ from previous version if the exact time of that change is relevant for a necessary lane change of another vehicle. **(15535 ✅)**
- ❗ Parking lots with parking out in reverse to a multi-lane link can cause simulation results to differ from previous versions. **(15572 ✅)**
- ❗ Simulation runs can have results differing from previous versions if a vehicle's maximum speed on a multi-lane link is smaller than its desired speed (e.g. on an uphill slope). **(15611 ✅)**

Viswalk

- ❗ Multi-threaded simulation runs with waiting queues can have results differing from previous versions. **(15575 ✅)**
- ❗ Obstacles and parts of areas which are smaller than the grid cell sizes can cause simulation results to differ from previous versions. **(15594 ✅)**
- ❗ Overlapping pedestrian times on conflict areas can cause simulation runs to have different results from previous versions. **(15601 ✅)**
- ❗ The grid cell evaluation results on ramps can differ from previous versions (since 2021.00-01). **(15613 ✅)**

2021.00-02 [92156]   2020-10-21

⊕ New Features and Changes

Data Model

- ⊕ New calculated attributes "WktLocWGS84", "Latitude (WGS 84)" / "LatWGS84" and "Longitude (WGS 84)" / "LongWGS84" for"LinkPolyPoint" which contain the world coordinates of the point as WGS84 longitude and latitude. **(15248)**

File Handling

- ⊕ All text output files except test mode macro files (*.m_o) are written with the character encoding UTF-8 now. A byte order mark (BOM) is written only into *.err and *.att files and also if the file is meant to be read by a PTV Vision program (and if that file without BOM is still to be read as ANSI): dynamic assignment files, ANM files, *.net for Visum. **(14972 ❗)**
- ⊕ The handling of the model archive has been changed because the temporary folder didn't allow easy access to text evaluation files. Now, the file open/save dialog doesn't contain the file type "*.vissim" anymore but there is the menu item File / Export / Model Archive which allows to create a *.zip file containing all the referenced files with the *.inpx file. The menu item "Extract Model Archive to..." has also been removed because a *.zip file can be easily extracted with the Windows Explorer. **(15542)**

Network Editor

⊕ During the complex editor states started from the vertical toolbar (major flow definition, car park creator, simple ITS), a new short help window is shown in the top right corner which lists the next editing step and possible options. The short help can be switched off (and back on) with the button at the right end of the network editor toolbar. **(14494)**

Signal Control

⊕ New French version of VisVAP including full documentation. **(15580)**

Viswalk

⊕ New area attributes "Queue spacing choice" (values: "Default" or "Fixed") and "Queue spacing" which define the pedestrian spacing behavior in queues if the area is a queueing area. "Default" is the traditional model with the spacing increasing backwards along the queue, and "Fixed" allows to set a fixed spacing value between each two adjacent pedestrians in the queue. **(15160)**

✅ Fixed Bugs

ANM Import

✅ The desired speed distributions in a network imported from ANM are now reproducible even if there are multiple class-specific desired speeds in the ANM file which differ by less than 0.1 km/h. **(15546 ⚠)**

Presentation

✅ 3D signal heads are now also shown in an *.avi video which was recorded with active quick mode. **(15503)**

Viswalk

✅ Alighting passengers from PT vehicles are now handled correctly by the network performance evaluation and for fire events. **(15414 ⚠)**

✅ The behavior of pedestrians on waiting areas is now also reproducible in certain special situations. **(15447 ⚠)**

✅ The pedestrian grid is now immediately updated after adding an area, so it is fully shown in a subsequent simulation run. **(15470)**

Workspace

✅ The missing menu item "Lists / Results / Vehicle Travel Time Results" is back. **(15578)**

⚠ Breaking Changes

ANM Import

⚠ Multiple class-specific desired speeds in the ANM file which differ by less than 0.1 km/h can cause the network to differ from an import with a previous version. **(15546 ✅)**

File Handling

⚠ The encoding of special characters in most text output files has been changed to UTF-8. In soime cases, a BOM has been added at the start of the file. **(14972 ⊕)**

Viswalk

⚠ Alighting passengers from PT vehicles can cause the network performance evaluation results to differ from previous versions. **(15414 ✅)**

⚠ Pedestrian behavior on waiting areas can differ from previous versions if a pedestrian starts to wait in the same time step when another nearby pedestrian arrives on the waiting area. **(15447)**

2021.00-01 [91224]

⊕ New Features and Changes

Data Model

⊕ 3D Information Signs can now also be assigned to parking lot groups and parking spaces. **(15340)**

⊕ Links have the new calculated attribute "WKT polyline (WGS84)" which contains a list of the spline points of the link (including start and end point) in WGS84 coordinates (longitude / latitude) formatted as WKT LINESTRING.
Nodes have a similar attribute called "WKT polygon (WGS84)" which contains all polygon points.
For both links and nodes the new calculated attribute "WKT location (WGS84)" contains the label position in WGS84 coordinates formatted as WKT POINT. **(14955)**

Dialogs

⊕ New item "Copy ID" in the context menu of the attribute selection dialog. This copies the complete name of the attribute (including relations, aggregate functions and subattributes) to the Windows clipboard, so it can be pasted into a COM script in a text editor. **(15433)**

Driving Simulator Interface

⊕ The simulator can now add vehicles (with individual vehicle types) to the network and remove vehicles from the network during the simulation run. The simulator can also take control over "normal" Vissim vehicles during the simulation run (and pass it back to Vissim).
This requires some functional changes in the interface:
All vehicles are identified by the Vissim vehicle number (ID). Vissim sends data of all vehicles (including simulator vehicles) to the simulator (including a new flag "controlled by Vissim"). Usually, the simulator can ignore data of simulator vehicles (not "controlled by Vissim"), with one exception: For new vehicles added by the simulator, the simulator must send a temporary CreateID to Vissim which is then sent back from Vissim together with the actual vehicle number assigned by Vissim. In all subsequent time steps, the simulator must send this Vissim vehicle number to Vissim for identification of the vehicle. **(15307 🛑)**

Evaluations

⊕ New result attributes "Demand (latent)" and "Delay (latent)" for vehicle inputs and parking lots. These contain the same values as the vehicle network performance evaluation but split per vehicle input / parking lot. The new vehicle input evaluation / parking lot evaluation needs to be activated under evaluation configuration in order to collect these results during a simulation run, and the evaluation period and time interval can be set there as well. For both types of network objects, there are now also result lists. **(14090)**

File Handling

⊕ If a 3D model file (static or vehicle/pedestrian) is not found in the folder specified in the filename attribute, the model file is now searched automatically in the folder Exe\3DModels of the Vissim installation, including all subfolders. The new path is saved in the filename attribute when the network is saved (*.inpx file, *.vissim file, *.tra file for scenario management). **(15356)**

Graphics

⊕ The provider for live 3D buildings is now MapTiler. (MapBox buildings shown in previous versions will cease do work by mid of September 2020.) **(15305)**

⊕ With active turn value visualization, movements selected in the synchronized list Nodes / Movements are highlighted in the network window as well. **(15342)**

I/O Installation

⊕ More service pack notifications: After deploying a service pack that is newer than the installed service pack, a notification is now displayed more often than before. Regardless of this, recent service pack notifications are still permanently displayed on the start page. **(14702)**

Installation

⊕ Update of CodeMeter Runtime: The software manufacturer WiBu Systems has informed us about an error in the component 'CodeMeter runtime', which we use for the license protection of our software. The bug affects the TCP/IP communication of the license server. It constitutes a security issue, but only has an impact in case of a targeted attack on the network. With this service pack, an update of the affected component is installed, fixing the problem. For more information, see https://www.wibu.com/en/support/security-advisories.html **(15525)**

Network Editor

⊕ The measuring tape (ruler icon) works now also upstream on link sequences. **(14217)**

⊕ When adding a circular link through the context menu in the network editor, the diameter and number of spline points can now be entered with the keyboard. **(12973)**

OpenDRIVE Import

⊕ Improved error handling for *.xodr files which don't conform to the OpenDRIVE standard. **(14650)**

Presentation

⊕ AVI recording in 2D mode. See the document "Vissim 2021 - What's new.pdf" and the manual for details. **(5610)**
⊕ Keyframes without a camera position can be used now to crossfade between layouts even during a camera movement. **(14195)**

Scenario Management

⊕ The format of the time stamps in the log (visible in the Project Structure dialog) is now always YYYY-MM-DD HH:MM:SS, independent of the Windows settings. **(15462)**

Signal Control

⊕ The signal controller DLL interface sends C2I (car to infrastructure) data for all approaching vehicles now to each controller requesting that. (Currently, this can be used only with a custom-built controller DLL for the SC type "External".) **(15408)**

Signal Controll

⊕ New integrated controller type "Ramp Metering Controller". With the new special editor mode "Create ramp metering facility", all required network objects are created automatically with a few clicks on the on-ramp and on the freeway. See the document "Vissim 2021 - What's new.pdf" and the Vissim manual for details. **(13004)**

User-Defined Attributes

⊕ The data source type for a new attribute is now by default "Formula" if the object doesn't support Data UDAs. **(14484)**

Vehicle Simulation

⊕ A warning message is now written to the messages window if a vehicle passing a parking routing decision cannot be assigned a parking space because there is no way back to the vehicle's current route (including subsequent ends of surrounding nested routes) from any of the available parking spaces. **(15407)**

VissimCL

⊕ If no values for random seed and/or simulation run number are set through the command line, the random seed from the loaded network is used, respectively the highest recorded simulation run number + 1. **(14580)**

Viswalk

⊕ Grid cells which belong only partially to areas or ramps or which are partially filled by obstacles are not considered walkable ground anymore. **(14855 ❗)**
⊕ New attribute "Path choice method" for static routing decisions, partial routing decisions and pedestrian route locations. This attribute defines how the pedestrian selects one of multiple possible ramps or elevators between the current area (with the decision/location) and the next routing location. The default value is "Area center" which causes the pedestrian to select the ramp or elevator which provides the shortest total crow fly distance from the center of the current area to the ramp (to further ramps) to the center of the area with the next routing location. The new value "Pedestrian posiition" starts the distance calculation from the current position of the pedestrian (when they choose their path to the next routing location, i.e. when arriving on the area with the current location). **(14424)**
⊕ New relation and new attribute at a pedestrian, both pointing to the closest other pedestrian (minimum distance from center to center), plus a new attribute showing that distance. **(15143)**
⊕ New result attributes for area measurements, areas and ramps: minimum, average and maximum distance to the temporarily closest other pedestrian over all pedestrians over all time steps in the respective time interval. **(15144)**

Workspace

⊕ New GUI for the handling of named network editor layouts, list layouts, chart layouts and camera positions: The drop-down list has been replaced by a button which opens the same GUI as for user-defined color schemes. This allows to select, add, overwrite, rename and delete named layouts / camera positions. **(10737)**

⊘ Fixed Bugs

Evaluations

⊘ The fuel consumption calculated by an EmissionModel.DLL assigned to a vehicle type is now shown correctly in the vehicle network performance evaluation. **(15409)**

Lists

⊘ Column filters can now handle numbers between 2^31 and (2^32)-1. **(15182)**

Meso Simulation

⊘ A vehicle leaving a micro section with its front end in the same time step when its rear end was still on a different link and when another vehicle entered that link with overtaking on the same lane enabled could cause a crash. This problem has been fixed. **(15390 ❗)**

Network Editor

⊘ If left-hand traffic is selected in the network settings, the major flow definition causes left-turn movements to have priority now at their conflict with opposing right-turn movements. Turns which don't cross the major flow have always priority over turns which cross the major flow in at least one direction. **(15396)**

Signal Control

⊘ An invalid evaluation graph causes only one warning message now upon opening the external GUI of a signal controller. **(15436)**

Vehicle Simulation

⊘ Problems with the handling of changed desired speed for platoon vehicles have been fixed. **(14500 ❗)**

❗ Breaking Changes

Driving Simulator Interface

❗ Some minor modifications and a recompilation are required for existing simulators to be used with this version because of a non backward compatible extension of the functionality. **(15307 ⊕)**

Meso Simulation

❗ Networks with micro sections and overtaking on the same lane can have simulation results differing from previous versions. **(15390 ⊘)**

Vehicle Simulation

❗ Simulations with platooning and changing desired speeds can have results differing from previous versions. **(14500 ⊘)**

Viswalk

❗ The new calculation of walkable ground can cause simulation results to differ from previous versions. **(14855 ⊕)**

2021.00-00 [89829]   2020-07-30

⊕ New Features and Changes

ANM Import

⊕ Vehicle class specific desired speeds (e.g. exported from Visum as speed per TSys) can now be imported. **(13279)**

Data Model

- ⊕ Links have the new calculated attribute "WktPolyline" which contains a list of the spline points of the link (including start and end point) in Vissim world coordinates in WKT LINESTRING format.
The new calculated attribute "WktLocation" contains the absolute position of the link's label position in Vissim world coordinates in WKT POINT format. **(15171)**

Dialogs

- ⊕ The search filter in the attribute selection dialog considers sub-attributes now as well as relations. The character '\' separates the corresponding levels. **(15147)**
- ⊕ Up to 5 previously selected attributes are now offered for selection in an additional drop-down box in the attribute selection dialog. Attributes which have been selected most recently within the last hour are shown with the highest priority and then (over the course of two weeks) eventually replaced with more often selected attributes. **(15146)**

DriverModel.DLL Interface

- ⊕ The subdirectory Exe\DriverModelData\ is not required anymore by Vissim and its location is not passed to the DLL anymore. **(15216 🔴)**

Evaluations

- ⊕ New result attributes for parking spaces, parking lots, parking lot groups, parking routing decisions and vehicles. New values for the vehicle attribute "parking state". See the document "Vissim 2021 - what's new.pdf" for details. **(2659 🔴)**
- ⊕ The vehicle record shows now the value from the end of the time step for all routing and platooning attributes of vehicles, i.e. after the vehicle has passed a routing decision and maybe a platoon lead vehicle has left the network. **(15217 🔴)**

File Handling

- ⊕ New option to save the network and all required additional data inside a single "model archive" file (*.vissim) and to open such model archive files. See the document "Vissim 2021 - What's new.pdf" and the manual for details. **(7985)**

Graphics

- ⊕ Live buildings are now automatically hidden if their footprint overlaps with the footprint of a static 3D object. In addition, specific live buildings can be hidden by selecting them in the new special editor mode "Edit building visibility". See the document "Vissim 2021 - What's new.pdf" for details. **(13967)**
- ⊕ Several additional options in color schemes for parking lots. See the document "Vissim 2021 - What's new.pdf" for details. **(14419)**
- ⊕ The OSM background maps have been removed due to legal reasons. PTV maps in four color gradings are offered instead. **(15241)**
- ⊕ The legend in the network editor shows percentage values of attributes now as 0% to 100%. (In the color scheme dialog, the values still need to be entered as decimal value between 0.0 and 1.0!) **(14925)**
- ⊕ The rendering in 3D mode is now handled in a separate thread, so the user interface is not blocked when a scene with many 3D polygons needs to be shown. **(12911)**
- ⊕ User-defined color schemes can now be named and added to the list of predefined color schemes in the color scheme dialog. They can also be selected, renamed, overwritten and deleted there. Named color schemes are saved in the layout file and can be read additionally from any layout file to extend the current list of color schemes. **(11578)**

Installation

- ⊕ The CodeMeter Runtime deployed with PTV Vissim has been updated to CodeMeter 7.00a. **(14778)**

Lists

- ⊕ After a new network object has been added, it is automatically selected now, and the global selection is changed accordingly if the list window is currently synchronized. **(13931)**

Network Editor

- ⊕ If labels for multiple queue lengths overlap, the largest numerical value is always shown now. **(14422)**
- ⊕ Special editor mode for the creation of all network objects required for a signal controller of the new type "Ramp Metering". See the document "Vissim 2021 - What's new.pdf" for details. **(14387)**
- ⊕ Special mode for creation of all the network objects required for a controller of the type "2-Stage Controller". See the document "Vissim 2021 - What's new.pdf" for details. **(14030)**

- ⊕ Special mode for creation of all the network objects required for a controller of the type "Pedestrian Crossing". See the document "Vissim 2021 - What's new.pdf" for details. **(14031)**
- ⊕ Special mode for creation of all the network objects required for a controller of the type "Railway Crossing". See the document "Vissim 2021 - What's new.pdf" and the manual for details. **(14404)**
- ⊕ The context menu key on the keyboard (usually to the left of the right Ctrl key) opens the context menu for the selected network object(s) now in the network editor, not necessarily the object(s) at the current position of the mouse pointer. **(14515)**

Presentation

- ⊕ New animation recording attribute "Recording scope" with the possible values "every run" (default), "first run only" and "final run only" which can be set to define in which simulation run(s) out of a multirun the respective files are to be recorded. **(14429)**
- ⊕ Storyboards and ANI recordings have the new attribute "Recording scope" with the possible values "every run" (default), "first run only" and "final run only" which can be set to define in which simulation run(s) out of a multirun an video / animation file is to be recorded. **(14180)**

Simulation

- ⊕ A formula used for a route can now access both attributes of the route and attributes of the vehicle/pedestrian through the temporary relations ROUTE respectively VEHICLE / PEDESTRIAN, e.g. [ROUTE\UDA1] or [VEHICLE\SPEED]. **(14332)**
- ⊕ New network object "attribute modification": Similar to an event-based script, an attribute modification can be executed at predefined times during a simulation run, to set a specific attribute of all objects of a specified type to a new value calculated by a specified formula. See the document "Vissim 2021 - What's new.pdf" and the Vissim manual for details. **(15271)**

VissimCL

- ⊕ The syntax for command line parameters has been changed to GNU syntax:{noformat}
  -r 42
  --randomseed=42
  -s 5
  --simulationrun=5
  -t 16
  --threads=16
  -v
  --verbose
  --version
  -h
  --help
  {noformat} **(15180)**

Viswalk

- ⊕ New pedestrian attribute "Orientation angle" showing the angle between the orientation of the pedestrian and the x axis in degrees (positive x axis is 0°, positive y axis is 90°).
  The pedestrian attribute "Orientation" has been renamed to "Orientation vector". **(14285)**
- ⊕ New result attribute "Required Safe Egress Time" ("RSET") in the grid cell evaluation. This attribute contains the latest simulation time in the time interval when at least one pedestrian was inside that grid cell. It can be used for color schemes for pedestrian areas, ramps and stairs. **(13640)**
- ⊕ The BIM Import can now import stairs with one of the geometry types TwoStraightRunStair, QuarterWindingStair, QuarterTurnStair, HalfWindingStair, HalfTurnStair, TwoQuarterWindingStair or TwoQuarterTurnStair from *.ifc files. **(12822)**
- ⊕ The CAD import for pedestrian areas supports the *.dwg 2020 format now. Units in *.dwg files are now also imported and the polygons are scaled accordingly. **(13532)**

Workspace

- ⊕ The column widths of the graphic parameter flyouts are now remembered between sessions. **(8037)**

⊘ Breaking Changes

DriverModel.DLL Interface

⚠ A DLL expecting the location of the subdirectory Exe\DriverModelData\ to be passed from Vissim might not work anymore. **(15216 ⊕)**

Evaluations

⚠ The vehicle record can show different values for routing and platooning attributes compared with previous versions. **(15217 ⊕)**

⚠ Vehicle record files containing the attribute "Parking state" can show different values compared with previous versions. **(2659 ⊕)**

Vehicle Simulation

⚠ Changing the length of a vehicle during a simulation run can cause results to differ from previous versions. **(14782)**

⚠ The active option "Enforce absolute braking distance" can cause simulation results to differ from previous version. **(15003)**

⚠ The value "Wait" for the parking routing decision attribute "Full occupancy behavior" in combination with long parking spaces fitting two vehicles can cause simulation results to differ fro previous versions. **(14784)**