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2023.00-08 [265886] 2023-08-25

## + New Features and Changes

### Installation

- + Update CodeMeter Runtime: The CodeMeter Runtime deployed with PTV Vistro has been updated to CodeMeter 7.60c. **(189716)**

## ✓ Fixed Bugs

### Graphical editors

- ✓ Inserting routes: When a route is being inserted, Vistro now again allows adding intermediate points on intersections. This is the same functionality as when a path is being inserted. **(161170 | 2294)**

### Network optimization

- ✓ Show all signalized intersections: Due to an error it was possible that not all signalized intersections were shown on routes in the network optimization tab. This error was fixed. This error only occurs, when parts of the network were created using Synchro import. This could happen either if the network was originally imported from Synchro, or if parts of the network were created using the merge feature. **(189015 !)**

### Traffic control tab

- ✓ Missing patterns: An issue was fixed, where patterns with numbers 2-8 were missing in scenarios. This happened when a pattern with number 2-8 was added to a scenario, and the base scenario of the Vistro file still had an old format, i.e. it was not yet saved with Vistro 2023, Service Pack (SP) 5 or higher. The new patterns were missing when the scenario was closed and reopened, or the Vistro file was closed and reopened. The issue only affected Vistro 2023, SP 5 and higher **(184055)**

## ! Breaking Changes

### Network optimization

- ! Results of the network optimization may change if parts of the network were created using Synchro import. **(189015 ✓)**

2023.00-07 [262232] 2023-07-03

## + New Features and Changes

### Simulation

- + Vissim preview updated: The Vissim preview has been updated to version PTV Vissim 2023.00-08. **(180879)**

## ✓ Fixed Bugs

### Traffic Control tab

- ✓ Patterns: When a pattern was added in a scenario, the data for the signal groups of that pattern was not stored correctly and the data was lost, when the scenario was reopened. Patterns with number greater than 8 were only saved in the base network, not in scenarios. When patterns with number greater than 8 were entered in a scenario, they would be lost when the file was saved and reopened. All these issues were fixed. **(182533)**

## + New Features and Changes

### Simulation

- + Vissim preview updated: The Vissim preview has been updated to version PTV Vissim 2023.00-06. **(168846)**

### Traffic Control tab

- + Maximum Green: When the Split (or Amber, All red, or Delayed Vehicle Green) of a signal group is changed, Vistro now adjusts Maximum Green automatically. Maximum Green then is equal to the split minus Amber, All red, and Delayed Vehicle Green. The condition for the automatic adjustment is that Maximum Green was equal to Split minus the other values before one of the other values was changed. When 'Create Default Signalization' is used, Maximum Green will now be consistent with the splits. When a signal group is inserted by entering a number in the cell, the Maximum Green of the new signal group will be equal to the split minus Amber, All red, and Delayed Vehicle Green. **(177969)**

### Trip Generation tab

- + Internal capture: A column '% Internal Capture' was added to the grid. It allows entering values between 0 and 100 and should be used to model demand that is captured in the zone. This demand is then subtracted in the following calculations. New columns 'Trips Generated Adjusted', 'Trips In Adjusted', and 'Trips Out Adjusted' show how the internal capture affects demand. The adjusted values are then used in the trip distribution and in the path volumes. Internal capture and adjusted demand values are also shown in the report. **(160845 | 919)**

## ✓ Fixed Bugs

### Calculation

- ✓ Other modes: An issue was fixed in the calculation of  $I_{p, int}$ , Pedestrian LOS Score. The calculation was incorrect, when metric units were used. **(178526 🚫)**
- ✓ Signalized: An issue was fixed in the volume distribution to shared lanes. The volume distribution was incorrect, when there was a left movement with low volume, a shared left-through lane and at least one other lane associated with the through movement. In this case, too much volume was put on the left-through lane and too little volume was put on the other through lanes. There was a symmetrical issue with shared through-right lanes. **(174192 🚫)**
- ✓ Signalized: The factor  $f_s = 0.91$  (see Equation 31-65, HCM 2010) was not applied consistently in all cases. This issue was fixed. It is only supposed to be applied, when the left turn is permissive. This is clearly stated in HCM 7th Ed. (see text after Equation 31-62, HCM 7th Ed.). The fix is also applied to HCM 2010 and HCM 6th. Ed, because from other locations (text after Equations 31-105 and 31-107, HCM 2010), it is likely that  $f_s$  should also be restricted to approaches with permissive left turns in HCM 2010 and HCM 6. **(178264 🚫)**
- ✓  $f_{RT}$  and  $f_{LT}$ : The values were sometimes shown as relevant, when they were not relevant, and vice versa. This issue was fixed. The left-turn value  $f_{LT}$ , for example, is only relevant on left turns, and only if phasing is not permissive. **(177716)**

### File import / export

- ✓ Centracs export: An issue was fixed, where the list of intersections contained too many intersections. **(173175)**
- ✓ Import Merge Data: An issue was fixed, where the import of Merge Data did not work. This issue only occurred when a .vistro file was opened by double-clicking in the Windows File Explorer. Specifically, the workflow (1) opening a .vistro file from the File Explorer, (2) switch to Base Scenario, (3) open Merge Data did not work correctly. Now, merge data will correctly be imported in the base network. **(171486)**
- ✓ OSM import, Vissim export: An issue was fixed, where no data was exported to Vissim when a network previously was imported from OSM data. The reason for this was that the 'Analyze intersection?' flag was always unchecked after the OSM import. Now, the analyze flag is checked by default after an OSM import and all data will be exported to Vissim. **(170283)**

### Licensing

- ✓ Dialog language: An issue was fixed, where the license dialog used the wrong language. It now uses the language that was set the last time that Vistro was used. **(172279)**

## 🚫 Breaking Changes

## Calculation

- ❗ Other modes: The value  $I_p$ , int, Pedestrian LOS Score may change if metric units are used. (178526 ✅)
- ❗ Signalized: Calculation results will (strongly) deviate from earlier versions, if there is a left lane, a shared-left lane and at least one other lane with through movement, and in the symmetrical case with a right lane, a shared right-through and at least one additional through lane. Volume distribution will be different, resulting in different delays, queues, and level-of-service, among other values. (174192 ✅)
- ❗ Signalized: Calculation results on signalized intersections will be different on approaches with left turns, if there is a shared left-through lane and at least one additional through or through-right lane. (178264 ✅)

2023.00-05 [257836]

2023-04-13

## + New Features and Changes

### File import / export

- + Centrats: File menu File -> Export contains a new entry 'Centrats' which exports timing data (splits, cycle lengths, and offsets) to Econolite Centrats. It is possible to determine, for which intersections data should be exported, and if all patterns or only the active pattern should be exported. One file for each intersection will be placed in a selectable destination folder. File names will contain the names of the intersection for easier identification. (165411)
- + Order of entries: The order of other menu entries was changed. A new entry 'Centrats' was added to the File -> Import menu. It allows import of timing and phasing data from Econolite Centrats. (171001)

### Traffic Control tab

- + Patterns: Vistro now supports multiple signalization patterns in a single signal controller. A pattern contains several values for each signal group, most prominently the split. When a pattern is set to active using the new 'Active Pattern' control in the Intersection Settings sub-table, splits are adjusted and calculations are now based on the newly activated pattern. All other patterns remain in the background and they will be exported to Vissim. The set of patterns on a controller can be managed by using the new 'Patterns' button on the toolbar of the Traffic Control tab. The button opens the new 'Patterns' dialog, where patterns can be added, updated, and removed. The value 'Coordination Type' now only can be set to Time of Day Pattern Coordinated and Isolated. The entry 'Free Running' was removed. It can now be set in the Active Pattern control. When UTDF Timing Plans files are imported, the timing plans will show up as selectable patterns in the Active Pattern control and in the Patterns dialog. (165410)

## ✅ Fixed Bugs

### File import / export

- ✅ Centrats, UTDF: Cycle lengths are no longer adjusted automatically to accommodate late pedestrian phases, that exceed the cycle length. As a consequence, cycle lengths will have the value as it is in the imported file. (171244)
- ✅ UTDF import: Intersections are no longer switched from fully actuated to semi-actuated. This happened in earlier versions on intersections with signal groups that were marked as 'coordinated'. (167981)
- ✅ UTDF import: There was an issue, where lane widths were changed when a UTDF import was executed. This issue was fixed: Lane widths will no longer change. (161175 | 2299)

### Traffic Control tab

- ✅ Exclusive Pedestrian Phase: Vistro no longer crashes, when Pedestrian Walk or Pedestrian Clearance are set, while Pedestrian Signal Group is 0. (169534)

2023.00-04 [255036]

2023-02-07

## ✅ Fixed Bugs

### Calculation

- ✅ Signalized, approach delay: Unsignalized movements were not taken into account correctly in the calculation of approach delay, when the movement's delay was set to 0. Such movements were ignored completely in the approach delay. This issue was fixed. The movement's volume now is taken into account in the denominator of the equation. (161165 | 2292 ❗)

## Reporting

- ✔ Copyright information: The copyright information at the bottom of graphical reports is now smaller. (161154 | 2280)
- ✔ Protected, Permissive: An issue was fixed, where values of the Control Types Protected and ProtPerm could not be distinguished, because the cells were too small. The width of the caption column in the report depends - as before - on the width of the caption columns in the grids on the screen. However, after the fix the width of the columns in the report is now much closer to the ones of the grids. (161163 | 2290)

## ❗ Breaking Changes

## Calculation

- ❗ Signalized: Approach delay will be different, if there is an unsignalized movement with delay set to 0 and non-zero volume. (161165 | 2292) ✔

2023.00-03 [254299]

2023-01-20

## + New Features and Changes

### Simulation & ANM

- + Previewer: The Vissim previewer was updated to a new version. (161147 | 2267)

## ✔ Fixed Bugs

### Graphical editors

- ✔ Object with key already exists: An issue was fixed, where two successive error messages appeared when trying to insert an intersection. The error messages were 'An object with the key ... already exists in the network'. and 'Newly created node does not have an east-, west-, north- or southbound leg.' (161161 | 2288)

### Scenario management

- ✔ Fixed crash when switching scenarios: A second issue was fixed. This also only occurred when the network optimization tab was open when the scenario was switched. (161156 | 2283)

2023.00-02 [253135]

2022-12-15

## ✔ Fixed Bugs

### File import / export

- ✔ UTDF lanes: Pedestrian volumes are now imported correctly. (110875 | 2274)

### Scenario management

- ✔ Fixed crash when switching scenarios: An issue was fixed, where Vistro sometimes crashed when a scenario was opened. This only happened in certain networks, and only when the Network Optimization tab was open, while the scenario was opened. (110874 | 2273)

2023.00-01 [252538]

2022-12-02

## + New Features and Changes

### File import / export

- + Egnyte: An issue was fixed that prevented the Egnyte system from seamlessly working together with Vistro. (110867 | 2257)
- + UTDF: The UTDF import was extended and improved. The menu entry File -> Import -> UTDF... now opens a dialog that allows an extended file selection from a specified folder. Multiple files and UTDF types can be selected by holding down the shift or control keys or by using the select all/none toggles and imported at the same time. An intersection filter ('Import section') sets the import scope for the file selection set to single or all intersections or to intersections in a coordination group. For Volume UTDFs a filter ('Volume import') sets the import scope for turn movement counts by time and date. The import of UTDF lane group files now also takes into account the data rows 'Lanes', 'Shared', 'Storage', and 'StLanes' attributes. (110863 | 2247)

## ✓ Fixed Bugs

- ✓ Synchro import: An issue was fixed regarding the actuation type of signal controllers. When a signal controller contained pedestrian signal groups, fixed-time controllers were wrongly set to semi-actuated. (110872 | 2266)

## Graphic parameters

- ✓ Detailed traffic conditions: Vistro no longer crashes, when 'Show Detailed Traffic Conditions' is turned on and the shown section of the network is changed. In earlier versions Vistro could crash while panning in the network. This only happened when there were unused exit approaches. (161142 | 2256)

## Simulation & ANM

- ✓ Missing signal heads: An issue was fixed, where signal heads were missing in Vissim after an export. This only happened in networks that were imported from Visum. (110866 | 2255)

## Traffic control tab

- ✓ Signal Coordination Group: After reading merge data, editing the cell 'Signal Coordination Group' did not work correctly. When a low number was selected, the control automatically changed to a larger number. This issue was fixed. (110864 | 2253)

2023.00-00 [249758]

2022-09-22

## + New Features and Changes

### File import / export

- + Synchro import: The description of intersections is now imported into Vistro's 'Notes' field, no longer into the 'Intersection' field. (110641 | 1941)
- + Synchro: Detector data from Synchro imports has been updated. Previously, on shared lanes, when the right turn was permissive, and through and right movements had different detector data in the Synchro file, the data of the right turn was used. Now, the data of the through movement is used. (110859 | 2238)
- + UTDF import: Vistro now supports the import of several UTDF file types: Lane Group Data, Phasing, Timing Plans, and Volumes. These imports are accessible through the File -> Import -> UTDF... menu entry. This feature is experimental and requires extensive user testing to comply with different formatting from data providers and conditions. User feedback is appreciated. The Lane Group Data UTDF currently focuses on volume parameters for providers such as Miovision. Geometric parameters will be added in future service packs. Phasing and Timing UTDFs have been developed for Econolite Centrac imports. An improved import dialog will be coming in a future service pack to improve the import workflow and enable the import of multiple files at one time. For the combined Synchro .csv import, please use the importer under File->Import -> Synchro... (110827 | 2202)

### Optimization

- + Hill Climbing: The offset of the master controller now remains unchanged. (110821 | 2197 🚫)

### Simulation & ANM

- + New RBC data format: The Vissim (ANM) export now uses the new RBC data format, i.e. it exports files with the extension .prbc. These can be imported using the ANM import in PTV Vissim 2023. The export also issues warnings, if there are controllers that do not run in Vissim due to data problems. It is not necessary to open Vissim for that. The messages are written to the message file (View->Message File). (110770 | 2116)

### Trip generation tab

- ⊕ ITE TripGen: All values entered in the dialog 'ITE TripGen', like Subcategory, Setting/Location etc. are now saved to the Vistro file. The drop-down lists will be repopulated with all of these saved values when the dialog is opened the next time, so calculations can quickly be conducted and data plots reviewed. **(110808 | 2179)**

## 🚨 Breaking Changes

### Optimization

- 🚨 Hill Climbing: The results of network optimization with Hill Climbing may differ. **(110821 | 2197 ⊕)**
- 🚨 Offset optimization: The results of the network optimization with offset optimization might differ from previous versions. **(110820 | 2196)**