

# **VISUM Release Notes**

**Version 11.0**

**Version 11.01-06**  
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**Data Model**

- ▶ A faulty calculation of the angle of lane turns at main nodes prevented the insertion of further lane turns even though it was permitted. **(8083)**

**Dialogs**

- ▶ *Graphic parameters dialog, "Link Bars" page:* Under certain circumstances instead of a proper layer name an "Error" entry was displayed in the "layer order" grid. This error has been fixed. **(8082)**

**Timetable Editor**

- ▶ *Graphic parameters for item bars:* The set bar attribute is no longer lost when saving and reopening a timetable editor GPT file. **(7853)**
- ▶ Closing VISUM the program used to crash when selecting a line route via the line route dialog while the timetable editor was open. **(8155)**
- ▶ Scrolling in the timetable editor could produce a state where the rows in the lower views were shifted against each other by one. **(8154)**

**Foreign Formats**

- ▶ *SVG export:* The export of SVG files is fully Unicode-enabled again, so that problems with Russian characters in particular can no longer arise. **(7512)**
- ▶ *SVG export:* Backgrounds in SVG format are now also exported during an SVG export. **(7092)**

**Graphics**

- ▶ *Link bar labels at digitized links:* When selecting the text position "in the middle", labels are now also drawn if the middle section of the link polygon is too short. The text box will not be displayed any more only if it is larger than the distance between the From-Node and To-Node of the link. **(8128)**
- ▶ In the network window the print frame can also be displayed with a dashed margin. **(8015)**
- ▶ *Screenshot:* Screenshots of texts no longer contain the arrows at the edges of the text box which are used to rotate the texts. **(8171)**

**Junction Editor**

- ▶ The sorting of the lane turns in the list view has been improved. **(8160)**
- ▶ A click on a "Switch to node..." selector used to cause a crash if the "Show also closed turns" option was not selected in the "Turns" view. This error has been fixed. **(8162)**
- ▶ **(8166)**
- ▶ Standard geometries at main nodes used to contain intersecting lane turns if the angles of the cordon links were unfavourable. The error has been fixed. **(8163)**

**Network Editor**

- ▶ *Line route, inserting the opposite direction:* The creation of the opposite direction was cancelled with a warning in certain cases in connection with link stop points. This error has now been fixed. **(8177)**
- ▶ *Editing the shape of line routes:* A crash no longer occurs if a filter is set for Main OD Pairs while editing the shape of a line route. **(8180)**
- ▶ *Aggregation of zones according to main zones:* The operation has been accelerated considerably. **(6892)**
- ▶ *Dialogs for SVG and DXF export:* When shifting or enlarging these dialogs, the network window in the background was not updated properly. This resulted in „stripes“. This bug has been fixed. **(8172)**

**PuT Operating Indicators**

- ▶ *All skims which take couplings into account:* Couplings were not completely accounted for if a vehicle journey had coupling sections, one of which started after midnight (departure time > 24:00) and the coupled vehicle journey had a standardized departure time (0 to 24 o'clock). (The error occurred since 10.03.27 and 11.00.09 only.) **(8175)**

## Other Operations

- ▶ *Signal coordination*: The procedure now takes into account main nodes. (8158)
- ▶ *Signal coordination*: The procedure no longer freezes if a path leads via the same SC twice in succession. (8159)

## Miscellaneous

- ▶ The supplied python script for displaying vehicle positions in the network no longer aborts when regarding a time in which a vehicle journey reaches its final stop. (8129)
- ▶ Under "Documentation", the Manual, the Online Help and the Quickstart Tutorial for VISUM 11 can now be downloaded as separate documents. (8055)
- ▶ *Menu*: Russian names are now displayed correctly in the script menu. (8101)

## Subnetwork Generator

- ▶ *PuT model in general*: The treatment of objects of the PuT model has been improved in several ways.
  - A) Analogous to PrT paths, PuT transfer walk legs now obtain cordon zones right where they enter or exit the active subnetwork. Demand can no longer be lost.
  - B) Entire stops are now transferred to the subnetwork if at least one of the assigned stop areas is part of the subnetwork. The transfer times matrix is no longer lost.
  - C) The part of a line route lying within the active subnetwork is now determined directly from the active status of the links. (7950)

## VISUM Files

- ▶ *Reading a version file*: Program crashes no longer occur if the version file contains open lists of type "Assignment Analysis" or "PrT Assignment Quality". The error occurred since Service Pack 11.01-04. (8174)
- ▶ *Reading version files*: Warnings concerning missing background files can now be suppressed (8156)
- ▶ *Reading signal groups from a network file*: The attributes Yellow, Amber and ICA Loss Time Adj are no longer lost. (8041)
- ▶ *ANM export*: VISUM no longer saves warnings to the error file regarding inconsistent transport systems at lanes if those transport systems are not exported. (8165)
- ▶ *PuT functions, Fares parameter*: The "Fixed supplements = Apply to path leg" setting is no longer lost when writing and re-reading a VER or PAR file. (8184)

11.01-05

Corrections, Bug Fixes and New Features (ID)

2009-07-01

## COM Interface

- ▶ *Add-Ins*: The "Buffers around PuT lines" Add-In no longer aborts with an error caused by an overflow, if the generated buffers are very large. (141)

## Data Model

- ▶ *Lane turns*: You can now define multiple lane turns from a lane to the same target leg. This e.g. serves to model trams in central position. (7414)

## Filters

- ▶ *Main node filter*: The filter status for main nodes is now correct immediately after reading a version file. (174)
- ▶ *Reading filters*: When reading in filter files, you can now choose to initialize the filters which are not contained in the file. (7572)

## Graphics

- ▶ *SVG export*: The dialog for specifying the output page has been completely revised and enhanced. (8145)
- ▶ *SVG export*: Rotated backgrounds and images at POIs are now positioned correctly when exporting to SVG. (8144)
- ▶ *SVG export*: When clicking on a network object the output of the ID now works in any common browser. (8143)
- ▶ *SVG export*: VISUM does not write original coordinates as a standard any more. The header of the file now includes export settings and used transformation parameters as VISUM attributes.

(8139)

- ▶ *Bar labels*: Line bar labels work again with constant texts as an alternative to network object names. (8019)
- ▶ *Graphic parameters, 2D display*: You can now enter the v-access value both in km/h and in mph. So far, VISUM interpreted the entry in km/h. (2699)

### Junction Editor

- ▶ In the node dialog, all control types are now available when creating a node. (8120)
- ▶ *Geometry view*: In some situations, the radio button for stages was selected even though a different network object type was active. The error has been fixed. (8126)
- ▶ *Junction Editor*: The widths of columns that were adjusted are now retained when editing network objects. (8099)

### Listings

- ▶ *Sorted lists*: Editing a cell in the "show only active objects" mode no longer discards the sorting. (7858)

### Demand Operations

- ▶ *Reading a VHD file*: Since service pack 11.01-04 activity chains could no longer be read in. The error has been fixed. (8119)

### Network Editor

- ▶ *Network Editor, Multi-Delete Nodes*: The conversion of node stop points to link stop points did not work in case of links of length 0 when deleting multiple nodes. (8132)

### PuT Operating Indicators

- ▶ *PassKmTrav, ServiceKm etc.*: Calculation errors could occur if the end of a vehicle journey section lay before the end of the vehicle journey, if the stop time > 0 at the last stop of the vehicle journey section, or if the run time between the last but one and the last stop of the vehicle journey section = 0. This has been fixed. (7972)

### PrT Assignment

- ▶ *LUCE*: Paths through the link network are no longer calculated if origin and target connector nodes of different zones lie within the same main node. (8137)
- ▶ Calculating DUE with a lot of time intervals no longer produces a memory error. (8121)
- ▶ *LUCE*: The gap indicated in the PrT assignment quality list is now correct for LUCE assignments even if the car units of the assigned TSys were unequal to 1. (8147)

11.01-04

Corrections, Bug Fixes and New Features (ID)

2009-06-22

### COM Interface

- ▶ *SaveToAccessDatabase*: The database is now closed again once the command is executed. (8114)

### Data Model

- ▶ *Demand models*: The existence of a demand model is no longer required. (3206)
- ▶ *EVA weighting matrices*: Corrupt networks could sometimes emerge if the network contained EVA weighting matrices when inserting or deleting zones. The error has been fixed; the weighting matrices are now deleted in this case. (8085)
- ▶ *EVA weighting matrices*: Deleting weighting matrices produced a memory leak. This has been fixed. (7896)
- ▶ The matrix attribute "Content" has been renamed "File name". As before, the file name saved therein is the path used when saving or opening the file last. The matrix data, however, *live* in the main memory. (7733)
- ▶ *PuT link run time*: Attribute values outside of the valid value range can no longer occur if you create new links or link types. (8096)

### Dialogs

- ▶ *Backgrounds, shape layer dialog*: Changes to the drawing order now take immediate effect, not just when clicking OK in the network window. (7887)
- ▶ *Graphic parameters, page "Charts"*: Analogous to the "Bars" page, the calculation of the min and

max values of the set attribute is now optional. In large networks, the build-up of the dialog can be accelerated considerably when deactivating this calculation. (7905)

- ▶ *Demand model dialog*: A detailed error message is now issued when entering an invalid sequence of activities. (3200)
- ▶ *Demand model dialog, creating a sequence of operations*: It is now ensured that each matrix is summed up only once, when aggregating the mode choice matrices to a DSeg. Summands could exist twice if multiple strata or groups shared a mode choice matrix. (3216)

### PuT Passenger Survey

- ▶ *Plausibilization*: The parameter "Max. perm. departure time deviation" now only affects the explicitly stated departure times. (8102)

### Junction Editor

- ▶ In the Geometry view, main nodes are now also displayed correctly if they contain only one node. (8092)
- ▶ In the standard layout for turns and main turns attribute "t0 PrTSys" has been replaced by "t0 PrT". (8088)

### Listings

- ▶ *Link list*: Crashes no longer occur when selecting the undirected value view in the link list after importing a link shape file. (8036)

### Network Editor

- ▶ Objects can be shifted again without being marked beforehand. (8081)

### PuT Operating Indicators

- ▶ The calculation of demand values from paths has been accelerated once more. (7994)

### PuT Line Blocking

- ▶ The block check and the adjustment of each block to vehicle journeys shifted in time now also retain a stay in depot if, using empty trips, it takes place at a stop point other than the arrival stop point. (8063)
- ▶ *Blocks*: You can now address blocks via COM. (4523)

### PrT Assignment

- ▶ Lane turns of the same lane group can now also be allocated to different signal groups, provided that these signal groups have the same green time. (8042)
- ▶ By mistake a negative progression factor was determined at signalized nodes with lane groups with a long green time and a positive loss time adjustment. The error has been fixed. (8090)
- ▶ *ICA report*: By mistake, for yield-controlled nodes, the report contained data on non-shared lanes. These are no longer issued. (8113)

### VISUM Files

- ▶ *Reading par files*: Reading in par files which contain references to modes that do not exist in the target network no longer leads to a crash. (8098)
- ▶ *Reading a par file*: Warnings are now issued if a par file contains references to demand strata, person groups, or activities that do not exist in the target network. (3223)
- ▶ *Reading a dmd file*: In VISUM 11, dmd files written with VISUM 10 could only be read incompletely so far. The two matrix tables were not accepted due to modified IDs. The problem has been solved. (8093)
- ▶ *Reading a dmd file*: The uniqueness of the home activity within a demand model is now guaranteed when reading in a dmd file. (3213)
- ▶ *Reading a dmd file*: Reading in activity chains now also succeeds if the demand model column comes after the activity codes column. (3201)

11.01-03

Corrections, Bug Fixes and New Features (ID)

2009-06-08

### Data Model

- ▶ *POIs with surfaces*: Describing POI surfaces with attribute WKT Surface now also works with the keyword MULTILINESTRING. (8073)

## Dialogs

- ▶ *Demand model dialog, generating demand matrices:* A new dialog enables you to control the type and dimension of the matrix generation. This helps to avoid an unnecessarily high number of matrices in the model and thus memory requirements that are too high. **(3209)**
- ▶ *Demand model dialog, creating a sequence of operations:* Demand matrices are now only generated and allocated if you exit the dialog via OK. **(3215)**
- ▶ *Stop dialog:* The Delete button in the "Spec. Walk Times" and "Wait Times" tabs is not invariably passive any more. **(7998)**
- ▶ *Demand model dialog:* You can now exit the dialog by pressing ESC in tab "Demand segments" if a single cell is focused. **(6065)**

## PuT Passenger Survey

- ▶ Data sets are now also read in if the departure time is greater or equal to the end of the analysis period. **(8072)**

## Timetable Editor

- ▶ *Regular Services Mode:* VISUM no longer crashes if you activate the regular services mode and then switch to the graphical timetable **(8080)**

## Junction Editor

- ▶ *Signal Timing View:* VISUM sometimes crashed when using the Undo/Redo functionality in the signal timing view. **(8076)**
- ▶ *Junction Editor:* Editing the auto link orientation at a node sometimes caused a crash in combination with undo/redo. This error has been fixed. **(8044)**
- ▶ VISUM no longer crashes when editing signalized nodes, if you switch to the Signal groups view after marking an item in the Turns view and marking columns in the list view. **(8057)**
- ▶ *Allocating lane turns to signal groups:* In case of certain topologies, the allocation of lane turns to signal groups used to be grayed out. This error has been fixed. **(8058)**

## Listings

- ▶ *PuT path leg list:* 1. The TSys-based distribution of supplements is now also taken into account in the fare of the individual path legs. 2. The global settings for the revenue calculation (fixed revenue, revenue by fare point) now have an immediate effect on the fare displayed in the list. **(6220)**
- ▶ If you mark the first item in a sorted synchronized list, the correct object is now marked in the network editor. **(8079)**

## Demand Operations

- ▶ *VISEM distribution/mode choice:* The run time of the procedure has been reduced even more. **(7897)**

## PuT Line Blocking

- ▶ When editing pre- and post-preparation times, block items are now also adjusted correctly, if the time is set from 0s to a positive value or from a positive value to 0s. In those cases, new layover time block items are generated/existing layover time block items are deleted. **(8062)**
- ▶ During line blocking, empty trips with a duration of 0s are no longer deleted, if they still contain a change of location and are thus relevant to the correctness of the block. **(8064)**
- ▶ A vehicle error is no longer issued, if a checked block and the vehicle journey sections used in it as well as their respective time profiles and lines have "no vehicle combination" as vehicle combination. In addition, both vehicle combinations checked against each other are output in case of an error. **(8066)**
- ▶ The block check now also detects time faults that are generated during the check caused by the creation of long empty trips. **(8035)**

## PrT Assignment

- ▶ *All PrT assignments:* The memory requirements have been reduced considerably while the run time is unchanged. **(8038)**

## PuT Assignment

- ▶ *Timetable-based assignment:* As of service pack 11.01-00, the procedure used to run a lot more slowly in networks with a large number of transfers. The error has been fixed. **(8051)**

**COM Interface**

- ▶ *COM*: Improved type check. Especially interfaces expecting a string do no longer accept COM objects. (8032)
- ▶ *Script menu*: User-defined add-ins are now retained beyond a VISUM session. (8045)
- ▶ *GIS Add-In*: The program does no longer crash if one of the network object attributes is to be used as radius (variable radius). (8039)

**Data Model**

- ▶ For attributes with the sub-attribute combination Demand stratum x Person group, only meaningful combinations are permitted. (7991)

**Dialogs**

- ▶ *Demand model dialog*: VISUM no longer crashes when switching to another demand model if you edit the column widths on tab "Demand strata" by hand. (8046)
- ▶ *Stage templates dialog*: Stage template sets are now listed in ID order. (8043)
- ▶ *Node editor*: In some node topology windows, the column headers could not handle Unicode and thus "???" appeared e.g. for Russian entries. This bug could be fixed. (8027)
- ▶ *Demand model dialog*: The grid is now always refreshed, even when deleting all objects in a tab. (7622)
- ▶ *Improved handling of user-defined attributes of the file type*: The Open button is now displayed correctly. (7672)
- ▶ The Allocation of signal groups to lane turns window now stores its position. (7873)
- ▶ *Main zone dialog*: You can now scroll the list of zones. (5998)
- ▶ *Options dialog*: Editing the "Save warnings to error file" option now takes immediate effect and not only when restarting VISUM. (8024)
- ▶ The Line routes window stores its active tabs even if it is closed via the Cancel button. (7878)

**Listings**

- ▶ The program no longer crashes after specifying the polygon of a main node and deleting one of its corners if the user switches into the list display and uses Ctrl+T to toggle back. (8025)
- ▶ *Undirected value display in (main) turn lists*: The undirected value mode now works correctly. U-turns have no opposite direction and are displayed individually. All other turns are combined with the respective object of the opposite direction. (8047)

**Matrix Editor**

- ▶ When saving matrices in ASCII formats from Muuli, the matrix values are no longer rounded in storage. (8031)

**Demand Operations**

- ▶ When structural properties are read from file (\$Zones / \$ZonalData), absolute values are calculated from the number of inhabitants and the person group's attribute value as percentage. (8040)

**PuT Line Blocking**

- ▶ Under certain circumstances, line blocking could not find a solution though there was no reason for that. This bug could be fixed. (7999)

**PrT Assignment**

- ▶ A PrT assignment is no longer executed with MPA or with Blocking back during the assignment, if the network contains further PrT demand segments that have already been assigned and are not to be assigned during this PrT assignment. (7975)
- ▶ *All PrT assignments*: The memory requirements have been reduced considerably while the run time is unchanged. (8038)

**VISUM Files**

- ▶ Version files which include SC stages that refer to non-existing signal groups can now be read in anyway. (8054)

11.01-01

Corrections, Bug Fixes and New Features (ID)

2009-05-15

**Data Model**

- ▶ The relation from POI category to Points of Interest now works correctly. (8020)
- ▶ If the standard speed of a PuTSys on a link type is 0km/h, newly inserted links of this type now obtain a very high run time for this TSys instead of 0s. (7838)

**Dialogs**

- ▶ *Several demand dialogs:* As of service pack 11.01-00 the data transfer from dropdown input fields did not work anymore. The error has been fixed. (8021)
- ▶ *Demand model dialog, creating an activity chain:* The chain is now always inserted in the currently selected demand model and no longer in the first one. (7978)
- ▶ *Warnings and error messages:* Messages are now also issued correctly in Russian, Chinese, and Japanese. (8022)
- ▶ *Valid days dialog:* In Russian, Chinese, and Japanese, the embedded calendar element now displays English month names. A translation of the names into languages with non-ASCII characters is not possible. (8008)
- ▶ Dialog "Save matrix to file": A warning is longer issued if the matrix has more than three decimal places. (7917)

**PuT Operating Indicators**

- ▶ *PassengerKm-flow bundle by territory:* A calculation now also takes place when combining the assignment options "Save paths as routes" and "Save volumes additionally for service trips". (8017)

**Other Operations**

- ▶ The signal coordination analysis used to miscalculate the link attributes SC Coord Wait Time and SC Coord Vehicles On Green [%], if several cycle times were specified in the corresponding signal coordination group. (8016)

**PrT Assignment**

- ▶ Cancelling a PrT assignment with MPA could sometimes lead to errors during the next assignment, since MPA was not entirely undone before the actual assignment. The error has been fixed. (26)

**VISUM Files**

- ▶ *Writing dmd files:* Matrices with a reference to external files are now only written during a dmd export if the "Matrix single list item" table has been selected. (8004)

11.01-00

Corrections, Bug Fixes and New Features (ID)

2009-05-13

**COM Interface**

- ▶ A new COM function "UpdateImpedance" is provided for the update of impedances at nodes and main nodes. (7938)
- ▶ The new COM method IProcedures.IsExecuting returns true, if a procedure is in process. Scripts can thus react to the different situation of the command via the menu or out of the procedure. (7635)
- ▶ The new COM methods IVisum.WritoTraceFile and WriteToErrorFile can be used to write texts to the respective files. (7636)
- ▶ There is a new method that specifies a color for backgrounds via COM that is displayed transparently. (6724)
- ▶ New COM objects are provided for OD Pairs and Main OD Pairs including container objects and access methods. The corresponding COM list classes were renamed accordingly. (7692)
- ▶ New COM methods provide access to the VISUM main window (Handle) and to the network window. (7918)
- ▶ *Filter.AddCondition:* The operators OP\_AND and OP\_OR were interchanged. This has been fixed. (71)
- ▶ You can now open and address the Junction Editor via COM. (7656)

**Data Model**

- ▶ Stage templates have been enhanced in such a way that stages can have multiple signal groups.



(7923)

- ▶ Lanes can now have user-defined attributes. (7735)
- ▶ A new control type "two-way yield" is provided for nodes/main nodes in contrast to "two-way stop", especially for the export to VISSIM via ANM. (6489)
- ▶ A new attribute AutoMajorFlow will be provided at nodes and main nodes indicating whether a major flow is automatic or has been set manually. (7151)
- ▶ The attribute name "radius" at node legs has been changed to "stop line position". (7948)
- ▶ The already obsolete attribute "AutomaticGreenTimeOptimization" has been removed. (7764)

## Dialogs

- ▶ Opening the line route dialog using the context menu of the timetable editor no longer leads to a crash. (7989)
- ▶ *Line routes dialog*: If multiple rows are marked in the right grid, for better orientation a matching grey marking is displayed automatically in the left grid. (7956)
- ▶ *Tabular re-routing of line routes*: Also in the "Re-routing" mode, the filter on "ToSP" in the dialog now affects the end stop of the current system route selection. (7985)
- ▶ *Comparing run and dwell times*: The specified column widths are now retained when clicking "Set run times". (7986)
- ▶ *Comparing run and dwell times*: Editing run and dwell times in the dialog Comparison of stop and run times of parallel lines now considers the fixation of departure times, just like when editing them directly in the line routes dialog. (7983)
- ▶ Options dialog, "Reset dialog positions": The action now immediately discards all dialog positions and not just when exiting the program. (7947)
- ▶ *HAFAS import dialog*: If you access a file name field and exit it without making any changes, the file will no longer be loaded anew. This way, dependent entries are retained, e.g. on the "Calendar" tab. (7875)
- ▶ The sorting in dialog Log and error files by the date columns is now done by the point in time and not just alphanumerically. (7794)

## PuT Passenger Survey

- ▶ You can now also specify origin and destination zone instead of origin and destination stop at survey data records. The connection search is then conducted from/to the zone and takes into account all stops connected to it. (7662)
- ▶ *Plausibilization of multi-row data sets*:
  1. By mistake, the "Input Stop Departure Time" always applied to the start of the line route instead of the input stop. This would sometimes lead to a failure of the plausibilization. The error has been fixed. Moreover, a detailed warning is issued if the program detects inconsistent time specifications.
  2. The program now objects to missing time specifications in data sets and no longer automatically replaces them with 00:00:00. (7993)

## Timetable Editor

- ▶ In the timetable editor, crashes related to UNDO and REDO no longer occur. (7997)

## Filters

- ▶ *Filter on service trip items*: After reading a version file, the filter status of service trip items was set only after explicitly evaluating the filter. The error has been fixed. (7934)

## Foreign Formats

- ▶ *Database export*: If attribute names exceed 64 characters, they cannot be used as database field name. In that case VISUM now automatically abbreviates the identifier. (8007)
- ▶ *Database export*: The functionality no longer depends on VISUM being registered as a COM server. (7891)
- ▶ The database export has been accelerated, particularly under 64bit operation systems. (7971)

## Listings

- ▶ Path listings:
  1. The synchronization mode is saved to list layout files.
  2. You can now mark rows via COM. This is necessary as in the network, the objects cannot be marked via IMarking. (7331)

## Demand Operations

- ▶ *VISEM*: Distribution matrices per destination activity and mode choice are only calculated as an option. (7951)

## Network Editor

- ▶ When deleting multiple nodes with two legs and connecting their links, allocations of signal controls will no longer be discarded at adjacent nodes. (7522)
- ▶ Inserting PrT paths via main nodes no longer triggers a crash. (8003)
- ▶ *Set link run times from line run times*: The operation now evaluates the "only active links" option correctly. (8005)
- ▶ *Network editor*: For links, a new special function has been added which interpolates the Z coordinates of polygon intermediate points. (7446)

## PuT Operating Indicators

- ▶ The attribute FlowBundlePassKm is now also offered by territory, analogous to PassKm, considering only paths which comply with the flow bundle condition. (4699)

## PrT Assignment

- ▶ *ICA*: The length of the pockets is taken into account when calculating the ideal saturation flow rate. (6947)
- ▶ The node attribute "Loss Time" is now used correctly for ICA. (7625)
- ▶ You can now define the saturation flow rate by lane. (7760)
- ▶ The Gq value is now always calculated correctly at signalized nodes. (8001)
- ▶ At signalized nodes, the types of the lane groups are now always determined correctly in the report (so far sometimes "Split" instead of "Protected"). (8002)
- ▶ *Signal time optimization*: The procedure now shows a progress bar. (7766)
- ▶ The number of the links issued in detail during the PrT assignment Equilibrium\_Lohse can now be specified (so far set to 50). (6866)

## PuT Assignment

- ▶ *Headway-based assignment, choice model*: A new choice model is provided that assumes a medium depth of information of the passengers that wait at a stop: the passengers do not know the precise departure times, but estimate whether it is worth boarding a line or not based on the elapsed wait time. The manual will give you further details. (7649)
- ▶ *Passenger transfers*: Timetable-based PuT assignments can now also determine transfers for pairs (From Vehicle Journey, To Vehicle Journey). The Passenger Transfers list provides corresponding new attributes. (6506)

## VISUM Files

- ▶ Roundabout data is now exported during ANM exports. (7291)
- ▶ *Reading a version*: Some versions from VISUM 10 which contained the procedure "Combination of matrices and vectors" could no longer be read in. The error has been fixed. (7980)
- ▶ *Reading demand data*: In the "overwrite" mode the program no longer issues unnecessary warnings concerning ID conflicts (for skim matrices only). (7821)
- ▶ You can now access the PrT basic page of the functions in the procedure dialog via XML and COM. (3849)
- ▶ *VHD files*: Time series from a VISEM VHD file can now also be read in VISUM. Please keep the order of the tables within the VHD file in mind: activities and behavior patterns must be read in first. (7961)

11.00-10

Corrections, Bug Fixes and New Features (ID)

2009-05-05

## COM Interface

- ▶ *SkimMatrices, ODMatrices*: Both containers now only contain the matrices of the respective type and not longer all matrices of the network. (7667)

## Data Model

- ▶ *Aliases*: Aliases on indirect attributes with aggregate function "Num" or "NumActive" now also work correctly after reading networks additively or versions. (7984)

### Timetable Editor

- ▶ *Undo/Redo*: The program would sometimes crash when undoing and later redoing modifications to vehicle journeys in the timetable editor. The error has been fixed. (7990)

### Graphics

- ▶ *Scale in legend*: The scale is now labeled with imperial units, if an imperial system of units is used. (7919)

### Junction Editor

- ▶ *Junction editor, signal timing view*: Marking a node with a stage-based control in the network editor and then switching to the junction editor no longer triggers a crash, if the signal timing view is active in the junction editor. (7965)

### Listings

- ▶ *PrT path list*: The insertion of specific indirect attributes no longer leads to a crash. (7981)

### Demand Operations

- ▶ *VISEM distribution/mode choice*: The matrix multiplication within the procedure has been accelerated considerably. (7936)

### Network Editor

- ▶ *Network editor*: For links, a new special function has been added which interpolates the Z coordinates of polygon intermediate points. (7446)
- ▶ *Backgrounds*: The horizontal and the vertical factors were interchanged when editing backgrounds. (7969)
- ▶ *Line routes dialog*: Switching to the line routes mode no longer causes a crash, if the dialog has already been used with a different version file. (7974)

### Other Operations

- ▶ *Converting paths*: VISUM no longer crashes when converting paths that were digitized beforehand. (7992)

### PuT Line Blocking

- ▶ *Empty trip-TSys*: You can now enter "no operator" as empty trip-TSys as the operator is optional at vehicle journeys. (1195)

### VISUM Files

- ▶ *Reading a network*: Completing line routes using function Create links has been accelerated. (7959)
- ▶ *Reading a network*: Reading in line route and time profile items has been accelerated. (7982)
- ▶ *Reading demand data*: In the "overwrite" mode the program no longer issues unnecessary warnings concerning ID conflicts (for skim matrices only). (7821)
- ▶ *Reading a version*: Some versions from VISUM 10 which contained the procedure "Combination of matrices and vectors" could no longer be read in. The error has been fixed. (7980)
- ▶ *"Texts" files*: Files for background texts can be read in again. (7973)

11.00-09

Corrections, Bug Fixes and New Features (ID)

2009-04-28

### COM Interface

- ▶ *SetTraceFile*: The command no longer accidentally affects the error file. (7902)
- ▶ *Screenshots*: If the current window itself does not offer a screenshot functionality (like lists for example), the content of the network window is now exported when calling up the functionality. (7929)

### Data Model

- ▶ *Setting line route lengths*: This operation used to be very slow if the network contained blocks. It has been accelerated considerably. (7901)

### Dialogs

- ▶ *Line route dialog*: Opening the dialog no longer causes a crash if the registry contains an attribute

selection for the tab “Items and profiles” but no corresponding format settings. (7893)

- ▶ *Russian*: The display of Russian texts is now correct in the input line of the attribute selection dialog and in the header of the options dialog. (7912)
- ▶ To avoid accidental operations, you cannot select type VISEM or EVA-P for a demand model without the respective license. (7913)

### PuT Passenger Survey

- ▶ *Plausibilization*: In a connection search, a TSys entered by the user for the preceding/succeeding section is now only required for the path legs that directly precede/succeed the survey path leg. Further path legs of the found connection may also use other TSys. (7944)
- ▶ *Reading passenger survey data*: VISUM no longer crashes if the file contains nothing but comment lines. (7926)

### Timetable Editor

- ▶ *Graphical timetable*: As an option, bars can now be displayed at active vehicle journey items only. (7906)

### Graphics

- ▶ Node flows are also displayed for u-turns. (7932)
- ▶ *Reading and writing world files*: VISUM sometimes determined the wrong path. The path is now determined explicitly from the position of the graphics file. (7895)
- ▶ *Tables*: Tables are now also displayed correctly if the left side of the table shows values of indirect attributes which can contain blank values. (7900)
- ▶ *Turn bars*: Even if the set “Distance between bars” is larger than 0, arrows at turn volumes are now positioned correctly. Moreover, the turn “line” is shifted in this case. (7904)
- ▶ The network display is now refreshed, if the Smart Map is docked when opening a list and switching back to the network editor. (7946)

### Listings

- ▶ *PuT path leg list*: 1. The TSys-based distribution of supplements is now also taken into account in the fare of the individual path legs. 2. The global settings for the revenue calculation (fixed revenue, revenue by fare point) now have an immediate effect on the fare displayed in the list. (6220)
- ▶ The initialization of the assignment no longer leads to a crash if the PrT path list is open. (7935)

### Demand Operations

- ▶ *Reading VISEM VHD files*: The import is no longer canceled if structure data (\$ZONE) are provided as real values. (7960)
- ▶ *VISEM distribution/mode choice*: The matrix multiplication within the procedure has been accelerated considerably. (7936)

### Network Editor

- ▶ *Editing the shapes of line routes*: A warning is now issued when digitizing several line routes at the same time, if you shift a point which is traversed more than once by the involved line routes. (7892)
- ▶ *Splitting a link*: The Z coordinates of the link polygons are no longer discarded when splitting links. (7910)
- ▶ *Creating main nodes*: The initial values of the main turns are calculated correctly again from the shortest paths when creating main nodes. (7916)

### PuT Operating Indicators

- ▶ The calculation status of the PassKmTrav-flow bundle attribute now depends on the calculation of a flow bundle. If no flow bundle has been calculated, the attribute is not determined. (7911)
- ▶ *Determining coupled vehicle journeys*: VISUM no longer crashes when accessing coupled vehicle journeys under certain conditions. (7884)

### Other Operations

- ▶ *Signal time optimization*: Crashes no longer occur when optimizing the cycle time. (7939)
- ▶ *Special functions of links*: The Z coordinates are now correctly adjusted when deleting collinear points of link polygons. (7909)
- ▶ *Special functions of links*: Nodes are no longer transferred to the link polygon when deleting

collinear points. VISUM used to generate polygons with two points at links with courses that had not been edited. (7908)

- ▶ The signal time optimization is now also carried out for main nodes. (7927)

#### Subnetwork Generator

- ▶ VISUM no longer crashes if the subnetwork is specified in such a way that some nodes of a main node lie outside of the subnetwork and some within. (7954)

#### PrT Assignment

- ▶ *PrT assignment DUE*: Calculations without blocking-back no longer produce an error. Congestions were not treated correctly in this case. (7931)
- ▶ *ICA*: The final capacity of a turn now depends on the number of lanes in its lanegroup, from which this turn is possible. (7775)
- ▶ The “PrT assignment quality” list is now also updated during the assignment. (7527)

#### VISUM Files

- ▶ *Reading graphic parameters*: In case of a missing image file, the error message now states the network object type using the image file. (7942)
- ▶ *Additive network reading*: In mode “First off, determine tables in file”, the “POI” entry is now only listed if the file actually contains POIs. (7933)

11.00-08

Corrections, Bug Fixes and New Features (ID)

2009-04-07

#### COM Interface

- ▶ *SetObjects*: In the list for path items, a DSeg as well as a path set can now be committed in SetObjects. (7888)
- ▶ *SetErrorFile, SetTraceFile*: A COM error is now thrown, if the specified file is already in use. (7839)

#### Dialogs

- ▶ *Matrix dialog*: The rows are now updated correctly when deleting matrices in the dialog. (7861)

#### Foreign Formats

- ▶ *Database access*: The subprocess for a database access now has the same priority as the main process of VISUM. (7705)
- ▶ *Exporting an Access database*: A detailed error message is issued, if a table cannot be written because it has more than 255 fields. (7863)

#### Graphics

- ▶ *Scale in legend*: The space for the scale is now determined by the width required by the other icons displayed in the legend. (7860)
- ▶ *Backgrounds*: Zooming quickly in a network in which an EMF file has been loaded no longer causes a crash. (7874)
- ▶ *Roundabout icon*: A new point object icon to illustrate roundabouts has been added. (7877)
- ▶ *Bar scaling in the legend*: The scaling is now also correct for bars with a network-wide minimum according to amount that is greater than the maximum. (7880)

#### Junction Editor

- ▶ The graphic display in the views Node, Links, and Turns of the Junction Editor is now also neatly arranged when using adverse coordinate systems. (7881)

#### Listings

- ▶ *Path list*: Infrequent crashes no longer occur, if a path list is open and you edit attributes in a different list. (7859)
- ▶ *PuT path leg list*: The program no longer crashes if a path is marked in the list and the assignment is calculated anew. (7801)

#### Matrix Editor

- ▶ In the list view, matrix values can be inserted again. (7857)

## Network Editor

- ▶ *Editing the course of line routes*: If couplings need to be separated when starting to edit the course, VISUM now lists such items in the trace file. (7848)
- ▶ The reading or deleting of line routes and PrT paths has been accelerated. (7885)

## Other Operations

- ▶ *Normalizing vehicle journey sections*: the operation is now much faster. (7862)
- ▶ *SC coordination*: The resolution of platoons has been improved. (7866)

## Miscellaneous

- ▶ VISUM sometimes crashed when being closed. The error has been fixed. (7855)
- ▶ Add-In parameters are saved beyond a VISUM session. (7882)

## Subnetwork Generator

- ▶ *Main nodes in subnetworks*: The program no longer crashes if paths pass through a main node when generating the subnetwork with option "cordon links". (6697)

## PuT Line Blocking

- ▶ Line blocking now also finds a solution if the number of required blocks becomes very high. (7886)

## PrT Assignment

- ▶ *ICA at yield-controlled junctions*: When calculating the move-up time, the link attribute "Share HGV" is now correctly evaluated. (7890)

## VISUM Files

- ▶ *Deleting layout files*: You no longer need to close VISUM to delete layout files. (7869)
- ▶ *Project directory for GPA*: The project directory for graphic parameters is transferred correctly again from the PFD file. (7889)
- ▶ *Difference network*: The difference network can now also be opened, if any lists are open in the versions to be compared. (7868)

11.00-07

Corrections, Bug Fixes and New Features (ID)

2009-03-25

## COM Interface

- ▶ *COM*: A defined COM error is now returned when canceling COM command "LoadVersion" interactively. (7714)

## Data Model

- ▶ Setting surfaces with a lot of faces via WKT has been accelerated considerably. (7826)

## Dialogs

- ▶ Opening the attribute selection window no longer leads to a crash if aliases have been specified for attributes with subattributes. (7816)
- ▶ *Graphic parameters dialog*: When classifying by a text attribute, numbers are no longer requested as class limits when opening the dialog. (7836)

## Difference Network

- ▶ *Valid days*: Reading and comparing valid days in networks with annual calendars is now much faster. Furthermore, the difference network now also identifies valid day objects with identical numbers, if they differ in the "day vector" attribute. (7436)

## Filters

- ▶ Filters are evaluated correctly again, if you specify a criterion via indirect attributes and, for an object, the relation refers to an empty set. *Example*: Even isolated nodes will now be active, if you filter nodes by Sum:Out links\Capacity PrT = 0. (7842)
- ▶ *Line filter*: Filters on time profile items mistakenly always resulted in "passive", if the time profile had no vehicle journeys. The error has been fixed. (7824)

## Graphics

- ▶ *Bar labels*: In case of a bar label with a "specific class value" or "class limit", the wrong class used

to be applied. The error has been fixed. (7817)

- ▶ Backgrounds can now also be displayed in format GeoTIFF. (4943)
- ▶ The stroke width of PrT isochrone links is now defined by the graphic parameters of marked links. (7813)
- ▶ *Graphics, bar labels*: The text display used to be too wide in case of vertical bar labels with no title, so that fewer texts were displayed. (7804)
- ▶ *Graphics, line bars*: Only the last bar used to be displayed, if several line bars were specified in the graphic parameters. (7805)
- ▶ If you delete an entry in the Scripts menu, the entry will not re-emerge when restarting VISUM (only if it is not an Add-In). (7841)
- ▶ BMP backgrounds are now displayed without any problems when using a strong zoom. (7245)
- ▶ The display of EMF files as backgrounds has been accelerated. (7232)

### Junction Editor

- ▶ The upper and the lower view of the Junction Editor is also refreshed, if the "Auto link orientation" option on the "Links" page has been deactivated and this is reversed using Undo. (7777)

### Listings

- ▶ *Zone list*: When opening the list, specific demand layouts are now only generated, if the respective option has been set under Extras – Options. In case of very large demand models, the layout build-up takes such a long time that users do not always want to complete it. (7843)

### Demand Operations

- ▶ *VISEM distribution/mode choice*: The procedure has been accelerated considerably. (7806)

### Network Editor

- ▶ The network view is now also refreshed when executing Multi-Edit for marked network objects. (7750)
- ▶ The window sizes are no longer reset when clicking the headers of the network objects tool bar, the quick view, or the smart map. (7558)
- ▶ *Deleting connectors*: VISUM no longer issues multiple queries when deleting several connectors. (6023)
- ▶ *Network check*: The option to set active "hits" of network object functionalities had been disabled and is now available again. (7847)
- ▶ After deleting a stop point, system route, line route, or path set, the attributes of the deleted objects are no longer displayed in the Quick View. (7830)
- ▶ Even if the network objects tool bar is set to auto hide, any clicks on its icons are now interpreted correctly. (7702)
- ▶ VISUM does not crash anymore, if, in the Junction Editor, you mark a new node with the mouse, which changes the marking in such a way, that a dialog opens. (7829)
- ▶ The result of the shortest path search includes all paths and connectors, even when editing the network. So far, single links or connectors of the shortest path were not marked in rare constellations, when recalculating the shortest path or when editing the network. (7828)
- ▶ *Marking line routes*: VISUM no longer crashes, if the "only active" option has been selected and the user marks a further stop point while the line route selection is empty. (7823)

### PuT Line Blocking

- ▶ *Parameters dialog*: A detailed warning is now issued outside of the dialog, if no block version exists. (7789)
- ▶ *Parameters dialog*: In certain cases, the "Transport systems" tab was very slow. This problem has been fixed. (7798)
- ▶ *Line blocking*: Optionally, only active service trip sections can be checked. This also applies during line blocking calculations if the "only active vehicle journeys" option has been selected. (7803)
- ▶ *Line Blocking*: VISUM no longer crashes when using the data of a system route with a link stop point for the interlining trips in a line blocking calculation. (7668)
- ▶ *Trace file*: The trace file now includes details on the running time behaviour of line blocking operations. (7715)

### PrT Assignment

- ▶ In the handling of the shortest path queue in the LUCE procedure, a rare error has been fixed.

(7831)

- ▶ *PrT assignment quality list*: For the LUCE procedure, the Relative Gap is now also correct, if several demand segments are assigned simultaneously for a transport system. The shared Gap is then issued at the first demand segment of each transport system. (7835)

#### PuT Assignment

- ▶ *Service frequency for headway-based assignments*: This assignment variant now also provides this skim when using choice models without passenger information. (7650)
- ▶ *Service frequency for headway-based assignments*: The value of this skim used to be too high under certain conditions. This e.g. happened, if several origin connectors existed for stops of the same line and no further routes with other lines were possible. The error has now been fixed. (7822)
- ▶ *Run time of headway-based assignment*: run time-intensive skims such as the fare or number of fare zones are now only calculated if they have actually been selected. (7820)

#### VISUM Files

- ▶ *DMD files*: Reading and writing DMD files is now faster if the network contains numerous matrices which are saved in separate files or consist of zeros only. (7815)
- ▶ Writing zero matrices while saving a version has been accelerated considerably. (7811)
- ▶ *List layouts*: Just like for any other VISUM file types, you can now open LLA files via drag & drop in VISUM. (7671)

11.00-06

Corrections, Bug Fixes and New Features (ID)

2009-03-06

#### COM Interface

- ▶ *AddLink*: The length of the created link complies with the length of the direct distance even if imperial units are used in this network. (7758)
- ▶ A COM error message will no longer be generated if VISUM cannot find the file *std.par* at program start. (7172)
- ▶ *Autozoom for POIs*: This function works correctly even if POIs do not possess a surface. (7792)

#### Data Model

- ▶ *Line blocks*: If a depot becomes a normal stop point, the stand items of the former depot now lose their "in depot" flag. (7756)
- ▶ *Manual major flows*: VISUM no longer discards manually defined major flows if links are closed that do not belong to the major flow. (7769)

#### Dialogs

- ▶ *Emme import dialog*: After clicking the [...] buttons, you can pick files with any extension. (7674)
- ▶ *Bars tab*: For Maximum "n.def." will be displayed, if the program cannot calculate the value. (7773)
- ▶ *Turn volumes*: The position of the floating window of turn volumes is retained when exiting the program. (7404)

#### Timetable Editor

- ▶ *Graphical timetable - Stop points on links*: When the timetable editor was called via marked links, all vehicle journeys were missing (completely or partially) that - with regard to the marked links - start from a link stop point or terminate at a link stop point. This error has been fixed (7732)

#### Timetable Network Graph

- ▶ *Base headway*: The restriction of 4 hours has been lifted. (7759)

#### Foreign Formats

- ▶ *Shapefile Import*: Again, this functionality is provided even if the "Shapefile Converter" add-on is not included in the licence. (5537)
- ▶ *SVG Export*: If a list is open when the export is started the content of the network window is exported. In previous versions, no export file was generated under these circumstances. (7779)

#### Graphics

- ▶ *Smart Map*: Clicking the Update icon in the network window tool bar will automatically refresh the Smart Map display. For performance reasons, network editing will not cause a general Smart Map



update. (7630)

- ▶ *Legend*: The program no longer crashes if the graphics layer Stop catchment areas is added subsequently and the legend is modified. (7748)

### Junction Editor

- ▶ *Signal timing view*: If the node editor has been opened in a maximized window, marking a node in the node list will no longer reduce the height of lines in the signal timing view. (7761)
- ▶ *Signal timing view*: No system error messages will appear when green times of signal groups are edited in the grid. (7771)

### Listings

- ▶ *Path lists*: All of the PrT and PuT path lists now also provide synchronization with the network editor. Thus you may autozoom paths marked in the list or shift the network section display automatically. (6442)
- ▶ VISUM will no longer crash if a timetable-based assignment is started while a PuT path leg list is open. (7786)

### Network Editor

- ▶ *Network check*: The check function for links with zero PuT run time did not produce a log of the affected links. This error has been fixed. (7790)
- ▶ *Couplings*: When reading a network from file, profile points without stop point in the coupling section will no longer generate inconsistent couplings. In case of inconsistencies, the entire coupling section is discarded. (7226)

### Miscellaneous

- ▶ The new release 1.7 adds to module helpers new methods GetMatrix and SetMatrix which get / set matrices of any type (skim and OD). (7762)

### Subnetwork Generator

- ▶ The demand of paths which cross a passive link directly after the source (or directly before the destination) connector is no longer lost on the respective connector. A cordon zone will be created on the connected node. (6458)

### PuT Assignment

- ▶ *Timetable-based assignment*: Connections not using any PuT line (i.e. those consisting of PuT-Aux path legs) can no longer be dominated by connections using PuT lines. Since connections without PuT lines are not bound to a temporal position, dominance for connection search is not a general property, but applies only for certain time intervals. Due to this modification, more connections using PuT-Aux than before will be found and loaded. (7657)
- ▶ *Headway-based assignment*: Now the procedure terminates with a warning if the network contains run times in the range of thousands of hours between two stops in a line route. Such run times, the assignment procedure cannot handle appropriately. (7781)

11.00-05

Corrections, Bug Fixes and New Features (ID)

2009-02-23

### Dialogs

- ▶ *Opening a matrix*: If you start the Matrix Editor from the Matrix or the Demand dialog, VISUM returns to the respective dialog when closing the Editor. (7534)
- ▶ *Graphic parameters dialog, Bars tab*: A dynamic tooltip indicates the exact functionality of the minimum width feature. (7032)
- ▶ *Matrix dialog*: Matrices can now also be opened with a double-click. (7675)

### Foreign Formats

- ▶ During a HAFAS import, less memory is required than before, especially when importing lots of specific transfer walk times. (7745)

### Graphics

- ▶ *Smart map*: VISUM no longer issues error messages when double-clicking the header of the smart map. (7619)
- ▶ *Graphic parameters*: In the graphic parameters, some numeric values are now rounded to avoid numbers with a lot of decimal places. (6809)

- ▶ *Turn volumes*: Invalid values are no longer saved to the turn volumes dialog when editing a turn volume radius with the mouse while the turn volume dialog is open. (7606)
- ▶ *Legend*: When using font size zero for text boxes in the network window, the corresponding texts are no longer displayed in the legend either. (7651)
- ▶ *Smart Map*: The Smart Map is now only drawn if the Smart map window is actually open. (7711)
- ▶ *Inserting a polygon*: The rubber band display works correctly again when inserting polygons. (7743)
- ▶ *Shortest path search*: Paths are now drawn with separate graphic parameters and no longer incorrectly in the 'Marked' color. (7574)

#### **Junction Editor**

- ▶ *Junction Editor, link mode*: The display is now also correct in case of a large network scaling factor. (7621)

#### **Listings**

- ▶ *Matrix list*: You can now search matrix lists. (7679)

#### **PrT Assignment**

- ▶ *DUE with blocking-back*: Correction of the prioritization of links compared to connectors when calculating blocking back. A spillback now rather occurs on connectors. This leads to changed assignment results. (7372)

#### **VISUM Files**

- ▶ *Reading a network*: Error messages are now issued if vehicle journeys which are inconsistent with couplings have to be discarded at the end of the reading process. Error messages are also issued in case of couplings which are inconsistent with themselves. (7005)
- ▶ *Reading matrices*: Reading matrices with a lot of zones which do not exist in the network has been accelerated. (7738)
- ▶ *VISUM files*: For the "Read matrix" operation, the number of the result matrix is now written to the XML procedure parameters file. (7740)