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Sittraffic Office

The integrated workstation for traffic engineers

A single software system for use by the traffic engineer, the operator and the service technician? Welcome to the world of Sitraffic Office!

Coordinated green phases, public transport prioritization, optimum response to current traffic conditions, etc. The control programs for traffic signal installations at intersections are getting ever more complex – and the range of software tools correspondingly more varied. To ensure an optimum workflow and a hassle-free working process for everybody involved, we from Siemens have once again broken new ground.

With Sitraffic® Office we provide a completely integrated modular software system that incorporates all necessary tools on the basis of a shared data pool – for the planner, the data provider, the software engineer, the operator and the service technician. The modular structure of Sitraffic Office allows the step-by-step implementation of a complete system over an extended period of time through the successive activation of additional functions or function packages in line with new requirements.



Transparency is key

All Sitraffic Office software packages use a single central data base. This means that the traffic planner has access to exactly the same data pool as the programmer of the intersection controller software or the service technician. There is no internal data import or export whatsoever anymore, the need to enter the same data several times is eliminated and errors due to double entries are prevented. This saves time and increases system safety because full consistency of all data at the planning work station and on the control level is ensured automatically and without any extra effort.

Optimum workflow as “by-product”

Sitraffic Office works according to the multi-user/multi-client principle. The administration of all projects and users within the system is organized in such a way that people at several work stations can work in parallel on the same project without problems or risk of confusion or data inconsistency – working in concertation instead of at cross-purposes.

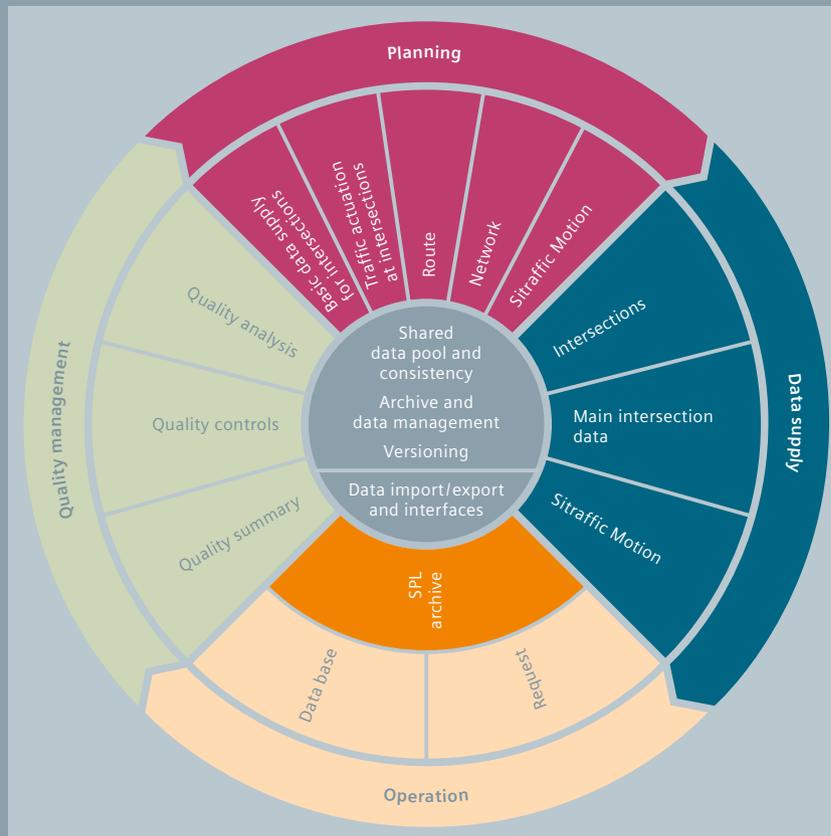
Different versions and states are automatically identified and marked for display in a variety of user-selectable ways.

Intersections, routes and the entire network in a single application

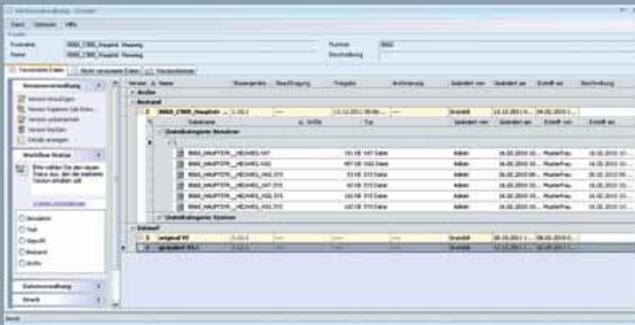
Sitraffic Office is the first system that integrates intersection, route and network planning. The close interrelations between elements in real-life traffic are now reflected in the software system’s layout, right from the start if desired! The network provides a complete overview and – with its conveniently definable links and routes – the basis for the definition of routes for the time-distance diagram in the planning and visualization modules. Adaptive network control systems such as Sitraffic Motion MX can then build on this network.



One system for the entire process circle

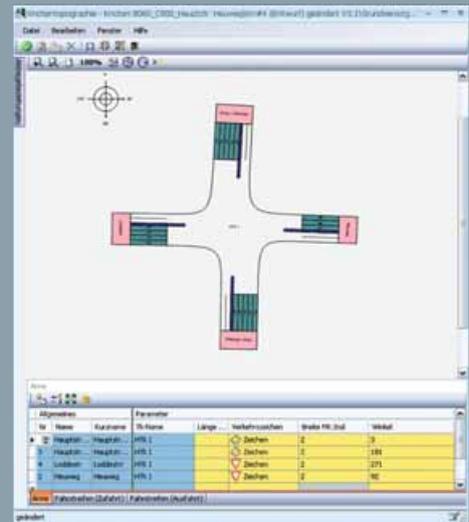


Siemens offers a system of coordinated software modules for the entire process cycle – from planning right up to analysis. Sitraffic Office is part of this end-to-end system. It replaces the software tools Sitraffic P2, Sitraffic Language TL and Sitraffic Control, offering all their functions and more in the scope of a completely integrated system. Of course we have made sure that the former systems can be smoothly migrated to Sitraffic Office, including the existing data base.



The version management tool ensures transparent work processes

General pre-settings and templates are available for the traffic-actuation libraries, among others



The topographical data for the intersection can be entered as graphs or tables

Advanced tools for the traffic planner

More punctual service in public transport, minimized congestion, optimum traffic light switching routines, efficient traffic guidance during peak times as well as slack times – up to now, it was difficult for traffic planners to achieve all these goals. Now Sitrtraffic Office provides a range of powerful advanced tools that help traffic planners complete their tasks much faster and always on the basis of reliably consistent data bases.

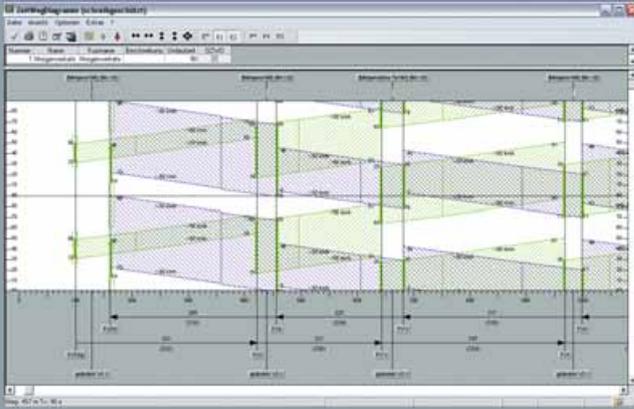
The right form of display for every need

Whatever role the system user may currently fulfill – planning an intersection or network, supplying data for an intersection controller or working in Sitrtraffic Scala – Sitrtraffic Office provides the matching visualization focusing on the relevant data for each application. The layout (Win7 design) can be adapted to the user's needs.

Templates save time

Sitrtraffic Office includes general, project-independent templates for intersection, intersection version and network layout. These templates can be accessed via the main menu for transfer to the various modules, and modified to suit different requirements. This simplifies planning work and saves time.

Pre-setting of the intersection offset times is possible also in the time-distance diagram



Maximum system support for planning tasks

Sittraffic Office creates an optimum work environment for traffic engineers. It provides, for instance, intersection versions that contain the complete data required at a specific moment in time for an intersection with or without traffic lights: planning data, technical traffic data supply, equipment control data and traffic actuation. The system supports compliance with the applicable guidelines and standards in Germany (RiLSA 92 & 2010), Austria (RVS 5.32), Switzerland (SN Schweiz) and Poland.

Entry of topographical data in graphical or tabular form

Intersection topology contains graphical as well as tabular elements. When a certain lane is selected in the table, the corresponding object is highlighted on the diagram. In case a true-to-scale graphical site plan is available, the system automatically aligns the intersection topography to it. Objects can be created and modified right within the intersection

topography – and later directly accessed also in the site plan. This function works equally well with right-hand and left-hand driving.

Coordinated green phases at a glance – with optimized offsets

Based on speed bandwidths, green phases are displayed as time-distance correlations between the intersections and updated in synchronization with cycle time. Distance is mapped on the x-axis, time on the y-axis. If desired, the various speed bandwidths can be colored individually. The system makes it easy to optimize offsets: No additional parameterization is required for optimizing the routes defined for the time-distance diagram, which in turn form the basis of individual adaptations – with the help of an evaluation function according to the HBS (Handbuch für die Bemessung von Straßenverkehrsanlagen, 2001, version 2009), if desired.

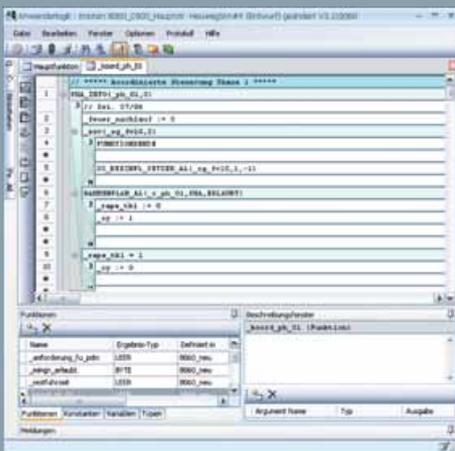
Traffic actuation? Fully integrated!

Engineers, programmers and operators working in traffic control would like to concentrate on their core tasks and not be confronted all the time with new user interfaces and software modules that they need to get familiar with before getting down to some real work. A self-evident demand, one would suppose? For Sitrtraffic Office it certainly is! Because the traffic-actuated modules of Sitrtraffic Office offer a range of functions that every traffic expert will understand intuitively and be able to work with immediately. The parameterization of the traffic-actuated dependencies and the traffic-actuated logic is completely integrated – for numerous additional benefits such as data consistency, shared central data administration and versioning.

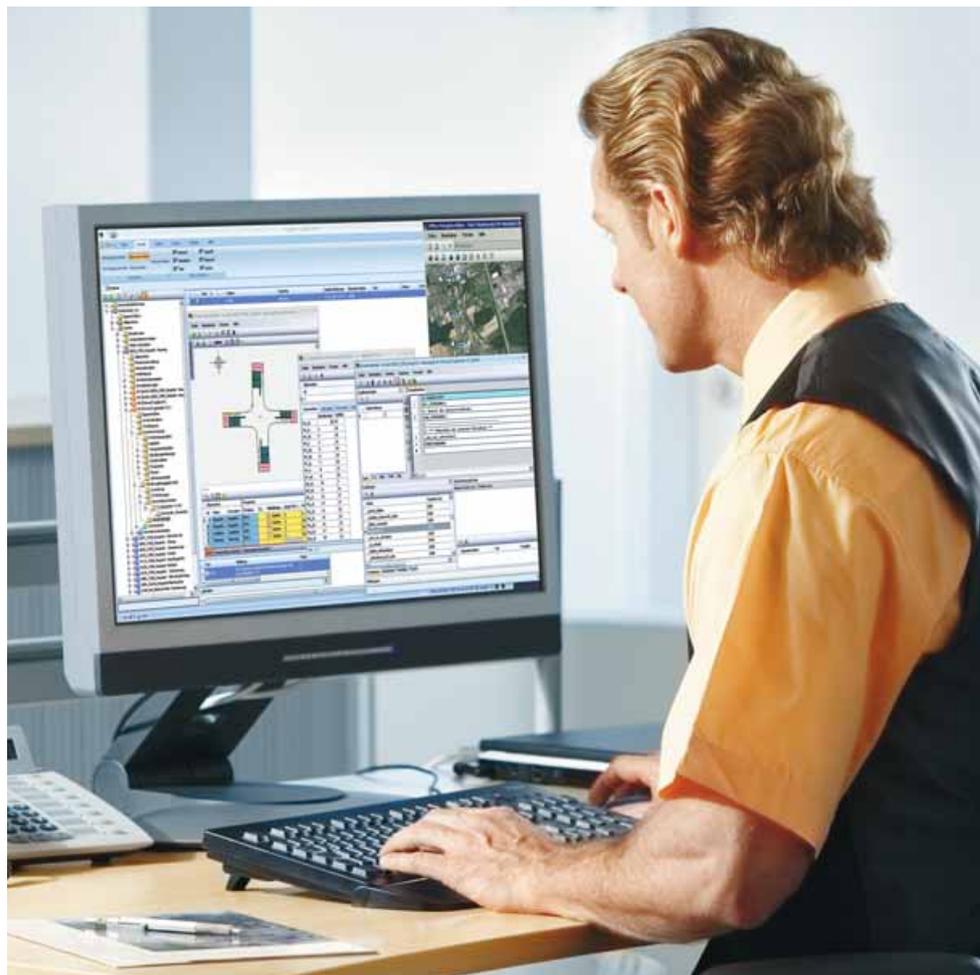
A traffic-actuated dependency created on this basis can receive its data directly within the Siemens controllers. Sitrtraffic Office even makes it possible to create and supply traffic-actuated dependencies for approved third-party equipment.

Phase-oriented control methods (PDM): time-saving function and user libraries
These libraries do not contain books, but pre-programmed and fully tested function modules and solutions. PDM provides you with a complete system-side library of convenient functions based on predefined solutions. The user library serves to store user-defined modules, which can be named at will and flexibly combined with existing PDM modules. Sitrtraffic Office ensures smooth and easy integration of all modules.

Fast and easy editing of logic sequences and functions thanks to highly convenient, modern user interfaces: copy & paste functions as well as plausibility checks right upon data entry save time. All necessary objects (signal groups, detectors), together with their customer-specific designation, are directly accessible



The PDM library is the integrated basis for the creation of user-defined traffic actuated logic sequences



All predefined functions are incorporated into the user's "individual program code" for traffic-actuated logic: the PDM libraries as well as the user libraries with their individually defined and optionally password-protected modules. In this way, each completed project adds valuable modules to the library, saving a lot of programming time in later projects.

Control logic (S-L): no programming needed – just parameterize

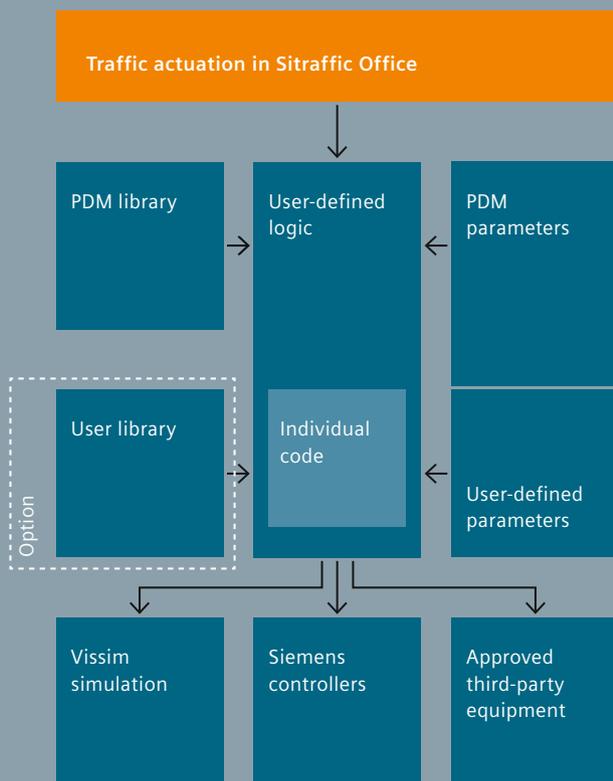
Standardized and highly flexible? With Sitraffic Office, this is no contradiction because S-L is the answer of Sitraffic Office to the demand for simplification through standardization. The different modules are already linked with each other and all the user has to do is adapt

the predefined logical sequences to the requirements of the intersection to be controlled – with simple parameterization, a task that requires no programming skills. And for all cases that call for special solutions or major modifications of standardized solutions, the Sitraffic Office modules provide convenient tools that help solve these tasks elegantly and quickly.

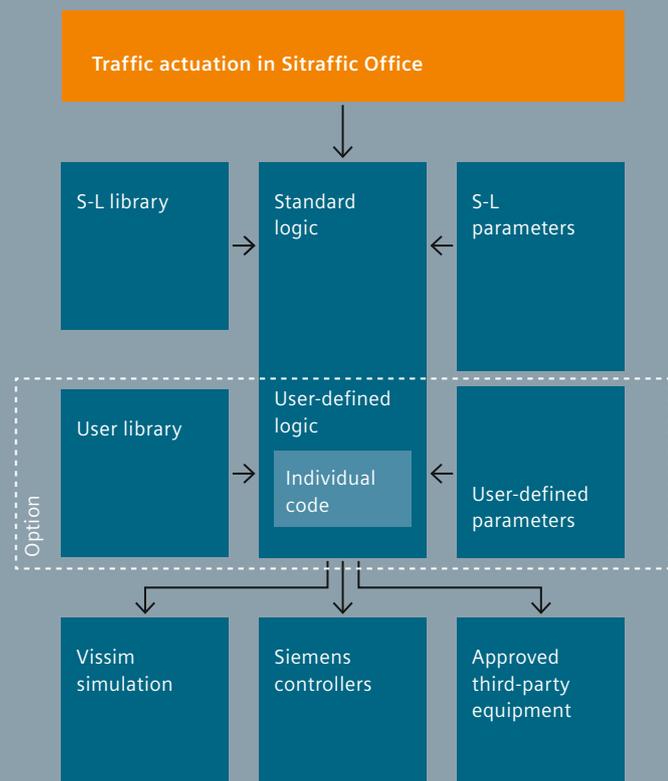
Integrated network planning (M-X): controllers and traffic computers in perfect harmony

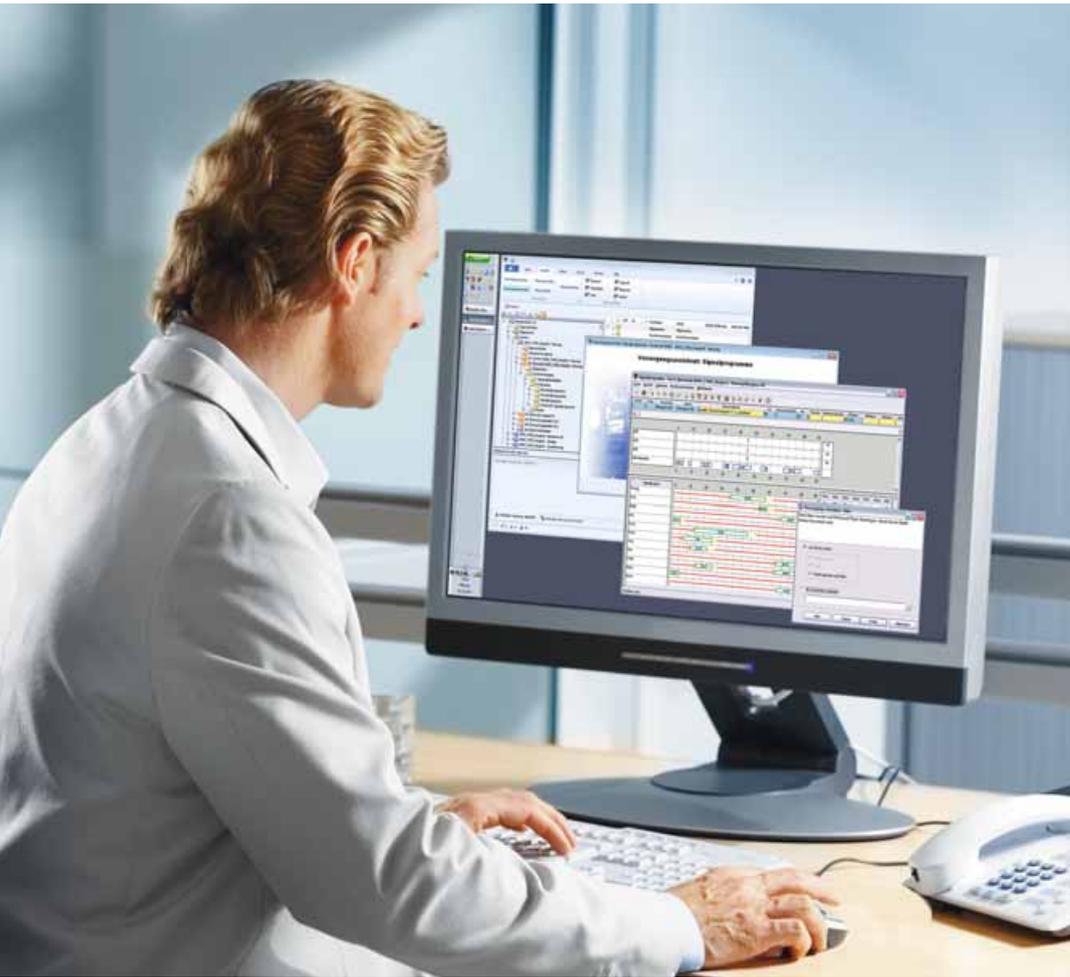
The Sitraffic Motion MX adaptive network control keeps gaining in importance. Sitraffic Office caters to that development. The local equipment component M-X makes frame plan calculation truly simple because it harmonizes the central control method carried out by the traffic computer (Sitraffic Scala) and the local control method implemented in the controllers (Sitraffic C800 or C900).

Phase-oriented control method PDM



Parameterization instead of programming with S-L





Finally: full integration of planning and data supply

The traffic engineer carries out the planning, defines the basic supply data and traffic actuation parameters and compiles neat and complete documentation files. Up to now, the implementation of the plans, i.e. the actual data supply of the controllers and the programming of the traffic actuation logic, was a completely separate process step, bringing with it all the uncertainties associated with "paper interfaces" or the export and import of large data quantities via an electronic interface.

With Sitraffic Office, this is a thing of the past – because Sitraffic Office allows the smooth transfer of equipment-independent planning data to equipment-specific supply systems. Plausibility checks indicate where equipment-specific modifications are required.

So all the programmer needs to do to finalize the controller supply logic is entering the equipment-specific data. This integration puts an end to double entries or contradictions between planning data and supply logic. In case of later revisions, the redesigned plans can be directly transferred to the controller; depending on the type of the modification and the available data links, this process can even be carried out remotely and for devices from different manufacturers.



Easy start-up thanks to the integration of Sitraffic Control

Sitraffic Office automatically imports available equipment data from previous versions (Sitraffic Office with Sitraffic Control) during start-up. Existing Sitraffic Control projects can be taken over and seamlessly continued in Sitraffic Office. For the migration of a Scala system, too, all data are imported.

Data supply for equipment from different manufacturers helps simplify processes

Sitraffic Office can supply equipment from Siemens as well as from other manufacturers. The software system allows planning and supply of all controllers based on the OCIT-O V2 standard and using the Siemens-licensed PDM(e) control method. This means that it is now possible to modify supply data and parameters for the traffic-actuated control method PDM right in the control center for all connected devices from any manufacturer. Without the need for field trips or working with different manufacturer-specific software programs.

Integrated traffic center data supply and supply wizards help save time

Sitraffic Office also incorporates the data supply of the traffic center. Permanent automatic data synchronization between the planning and supply modules ensures full consistency between traffic center and controller data so that all central functions are carried out exactly as planned.

Modifications are made especially easy thanks to our supply wizards that automatically generate standard processes for typical changes (such as signal program modifications) and guide the user through the processes for creating, changing or deleting data sets. Any resulting changes, for instance the generation of an EPS plan following the modification of a signal plan, are executed automatically and the corresponding data exported to Sitraffic Scala. After completion of the process, the controller respectively the traffic center is equipped with the new data, the old version is safely archived and the new version made accessible in the current data base. An easy, smooth and convenient process.

An operator using the system for a planning task, for instance, does not need to see the objects, attributes and contents of the supply logic. Therefore the corresponding visualization hides all objects that are currently not required – without compromising data consistency or continuity.

Faster navigation thanks to direct object access

With Sitraffic Office, any goal is only a few mouse clicks away: a click on the object automatically opens a context menu from where another click takes the operator right to where he wants to go. An “object” can be anything: an intersection, a detector, a route section, a whole network, a segment, a route, Sitraffic Motion MX, etc.

New tools facilitate visualization and processing

New software tools offer a multitude of visualization options for signal plans, coordinated switching phases and intersections. The tabular representation options now integrate a whole array of

flexible sorting and auto-filter functions and allow operation directly from the list. General functions such as copy & paste, or logical operators such as “and/or” can be used at numerous points within the system.

Quality management within the system or for standalone elements

Sitraffic Scala encompasses a quality management module that monitors traffic light switching states and characteristics such as waiting times upon pedestrian or vehicle green requests or travel times of public transport vehicles. The common data pool maintained with the help of Sitraffic Office is an essential prerequisite for effective quality management. For any traffic lights not connected to a traffic center, standalone quality management analyses are available.



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