



PLANNING, EVALUATION & OPTIMIZATION OF SIGNALIZED INTERSECTIONS

LISA is a comprehensive software package for planning and evaluating intersections, testing traffic-actuated controls and simulating traffic flow. It can also be used to upload data directly to traffic controllers.

LISA plans, evaluates and optimizes traffic controls for single intersections, for progressive signal systems and for road networks. Corresponding features are available for working with unsignalized intersections or roundabouts. LISA provides efficient solutions, using special features that prioritize busses and trams and that optimize green times and intersection layouts. Detailed simulation and analysis of the planned controls enable a comprehensive evaluation to be made of traffic controls and conditions.

Once the traffic controls have been created in LISA, the data can be directly uploaded to a variety of controllers from numerous different signal manufacturers.

LISA runs on all computers with a current Microsoft operating system as single license or floating network license.

PLANNING

LISA provides a simple yet efficient way of planning traffic systems:

- Automated calculation of travel paths, intergreen times and signal timing plans
- Intuitive creation of stages and stage sequence plans
- Stages and stage sequence plans
- Automated calculation of stage transitions
- Generation of permission plans
- Display of coordinations in time distance diagrams
- Import of GPS data collected via measurement trips
- Automated analysis of traffic counts
- Display of public transport lines in coordinations
- Automatic generation and optimization of coordinations

EVALUATION

Reliable evaluation of traffic intersections is essential for successful planning.

- Evaluation of unsignalized intersections with right-of-way signage and "right goes first" rule
- Evaluation of roundabouts
- Evaluation of signalized intersections in accordance with international guidelines like HBS 2015, RVS, etc.
- Evaluation of coordinated corridors and networks
- Easy-to-perform analysis of complex traffic-actuated controls

CONTROL

The planning and simulation of traffic-actuated controls is one of the main features of LISA.

- User library for logics
- Integration of user-defined function libraries
- Extensive controller functionality
- Import and use of a variety of control algorithms
- Extensive testing and debugging functionality
- Creation of schedules for bus and tram lines, and definition of detection points
- Simulation of complex traffic-actuated controls
- VISSIM interface for simulating corridor and network controls, including centralized network controls

UPLOADING DATA TO CONTROLLERS

LISA can upload data to controllers of numerous different manufacturers, either on-site or via a traffic control center.

- Automatic monitoring functionality in the test site and also for data export
- Automatic generation of source code in Java or C
- Upload of basic data to controllers in accordance with OCIT®
- Conversion of control logic to executable machine code
- Upload of all necessary data, including the control logic and all parameters

Project Management

Professional project management forms the program's core. It is here that intersections and coordinations can be created, deleted, imported and exported. Intersections are clearly organized in a hierarchical order, making it fast and easy to navigate among them. Intelligent search and filter routines make your day-to-day work easier. Different planning variants can be allocated a status (in-use, archive, draft, etc.). Explanatory notes can be created and attached to the intersections. In the network version, centralized data is made available to multiple users via different access rights. via different access rights.

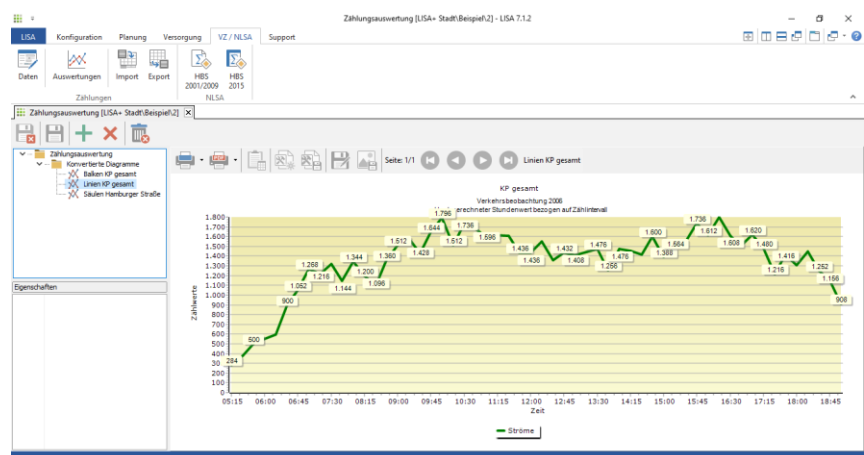
Grafical Data Entry

The basic information needed to create the control, i.e. the intersection layout, signal groups, and lane-specific vehicle types, can also be entered graphically. This data is then used to automatically generate diverse matrixes and tables, including the conflict matrix and the signal group table, and to automatically calculate intergreen times. Changes can be made in the tables or via the graphic interface. Easy-to-use automated shortcuts and sensible defaults make data input easy. For example, regional settings such as the Austrian RVS standards can be stored in a default settings file.

Traffic Counts

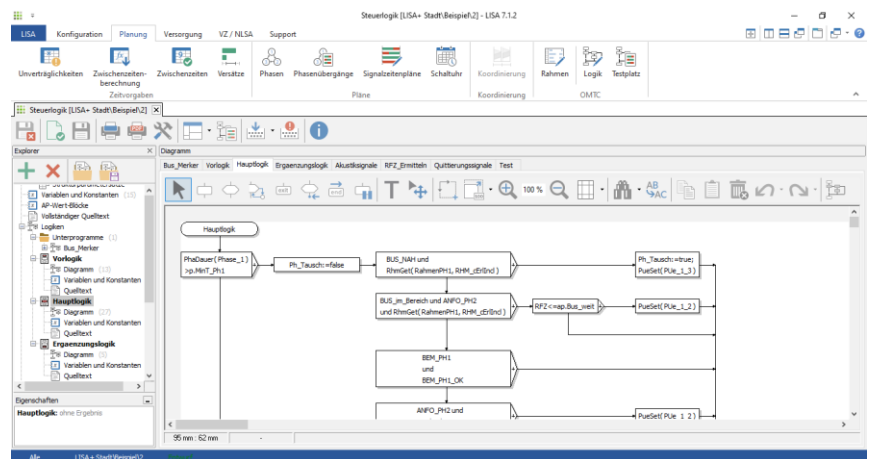
Traffic counts can be analyzed in tables and diagrams in the Traffic Count module. Either the data can be entered manually, or a variety of interfaces to electronically collected data can be used, including interfaces to the central traffic computers. The number of intersection legs is unlimited, allowing intersection flow diagrams to be displayed for every intersection. The report wizard makes it fast and easy to create a variety of custom reports. Reports that are used often can be saved and quickly recreated when needed. Reports on data such as peak-hour traffic flows can be fed into evaluations of signal timing plans.

Counts Analysis



Traffic Actuated Control

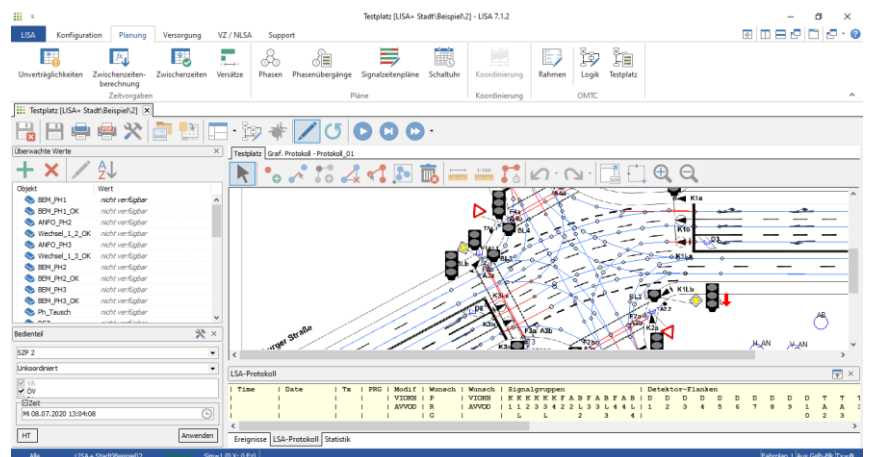
The OMTC module (Open Method of Traffic Control) in LISA can be used with any type of traffic-actuated control and for any task – from extending green times to creating complex coordinated controls with public transport priority. LISA OMTC offers an easy and efficient way to create traffic-actuated controls and upload them to the controller. It also provides extensive, realistic testing options.



Logic Editor / Test Site

The logic editor is intuitive and easy to use and features a data entry wizard that covers every step you need to take. Users have access to a rich library of controller functions (OML) and can simply "click" their control together. Numerous testing, simulation and evaluation features are then available for use in the LISA test site. Detector on-times can be simulated manually with a click of the mouse, or by using a random generator or test patterns, and then analyzed and reproduced to ensure high-quality controls. An integrated debugger allows you to follow and analyze the control in the logic editor, step by step. Controls can then be exported via the VISSIM interface and simulated in VISSIM with a virtual OMTC controller.

Testing and Quality Analysis



Technical requirements

Hardware equipment minimum:

- PC with Windows 8, Windows 10 operating system
- CPU: Intel Pentium or AMD Athlon from 2,0 GHz
- Main memory: 2 GB minimum
- Hard disk: 20 GB (1 GB available hard disk space for the program data, the total capacity required depends on the scope of the project data)
- Monitor: 19" screen size (minimum resolution 1280x1024)
- Interfaces: USB

Recommended:

- PC with Windows 10 operating system
- CPU: Quad Core
- Main memory: 8 GB
- Hard disk: 500 GB
- Monitor: 22" screen size (minimum resolution 1680x1050)
- Interfaces: USB

License Management

LISA requires a hardlock key (USB dongle) for the license information. LISA currently uses the CRYPTOBOX USB from Marx Software Security. This can be installed locally on the LISA client or centrally on the LISA server. Local means that each LISA client needs its own dongle. If the LISA server can access a LISA network dongle, it provides the LISA clients with the license information contained therein.

System-Requirements:

- Windows operating system from Windows 8 with 64-bit
- Main memory depending on type of Windows version
- TCP/IP Network connection
- Required hard disk storage approx. 200 MB
- USB interface for hardlock key (Cryptobox dongle)

SCHLOTHAUER 
& WAUER

SCHLOTHAUER & WAUER
Ingenieurgesellschaft für Straßenverkehr mbH
Ehrenbergstr. 20
10245 Berlin, Germany
+49-30-936672-0
lisa@schlothauer.de
www.schlothauer.de