

Sentinel Controller Emulation

Features:

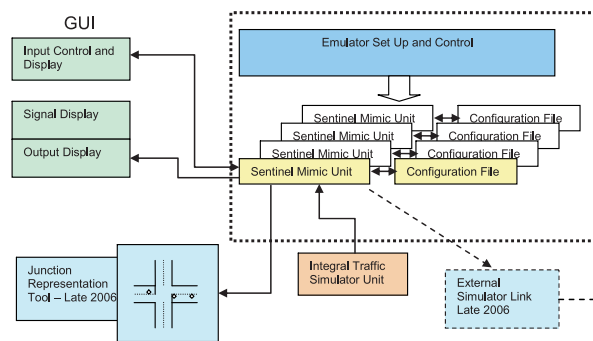
- Prove junction designs work before committing to equipment
- Simulator allows comparison of different operating modes including MOVA
- Adjustable simulator run speed to enable efficient testing at 12x faster than real time
- Make fast changes to designs as site works progress
- Demonstrate improvements in traffic throughput and reductions in congestion by 'before and after' simulation
- Simple Windows™ operation Allows validation and optimisation of designs and site configurations on a PC
- Has simulator facility for long term testing
- Supports multiple Sentinel cores simultaneously
- Facility to automate many routine test operations
- May be used for MTC configuration testing (at current Sentinel feature level)
- Recommended system requirements: PC running Windows XP™ 1.5GHz or greater, 256MB RAM, 2M HDD space.

TSEU GROUP
Microsense Systems
Traffic Signals UK



Head Office

15 Narborough Wood Park, Desford Road
Enderby, Leicestershire LE19 4XT
T 0845 201 2750 • F 0845 201 2850
Email: sales@tseu.net • www.tseu.net



To provide a PC based design tool to allow quick and efficient verification of Sentinel controlled installations.

The Sentinel Emulator allows users to develop and prove the operation of their junction designs on the desk top. This improves the efficiency of the process and allows rapid changes to sites to be implemented.

Structurally the Emulator comprises of three parts:

- A Sentinel mimic unit (SMU) - that performs the functions of the controller
- A user interface - that applies stimuli and records the response of the SMU
- A simulator - as described below but which also provides an upgrade path for interfacing to third party simulation tools.

User windows allow the monitoring of signal or other outputs, and the control and monitoring of controller inputs so at its simplest level the emulator can be run as a PC based test box.

The Microsense Emulator includes a number of innovative features that improve the confidence of the traffic engineer. The integral simulator tool lets the user create traffic flows into the junction with a mix of vehicle types and flow rates including a random arrival function. While not intended to compete with the widely available simulation tools in use by many traffic engineers this

facility does allow individual junctions to be tested and assessed with traffic flows rather than the current practice of triggering specific detectors to mimic particular event types. The simulator tool also allows users to demonstrate real benefits in implementing traffic control, for example how the junction performance would improve with the application of MOVA.

The emulator also supports a scripting function. This allows the user to write and record a sequence of instructions to the emulator. This allows routine testing to be applied consistently to all the sites that the user develops. Both the scripting and simulation facilities allow considerable automation of design testing.

In addition to these features, the emulator can support a large number of Sentinel mimic units simultaneously, each with its own configuration data. While this feature may be little used in junction design, when coupled to a network simulator it is possible to accurately reproduce the characteristics of the network.

Future developments include an Interface to larger simulator tools (Aimsun, Paramics, Vissim, etc.); simple junction representation for easy visual access; user tool for creation of junction plan views; parallel operation of multiple Sentinel cores for network emulation; export of junction design information to RM and STM systems; and import of Junction layouts from Configuration Tool

For further information email sales@tseu.net