



# OSCADY PRO

## Optimised Signal Capacity and Delay: Phase-based Rapid Optimisation of traffic signals

### OSCADY PRO

is a phase-based traffic signal optimisation program. OSCADY PRO was developed in conjunction with the Centre for Transport Studies at UCL (University College London). The software makes use of a number of unique optimisation techniques and can be used for isolated junctions, or the results can be exported into TRANSYT for use in linked systems.

### OSCADY PRO

can automatically generate and optimise stages and stage sequences. All that is needed is for the user to supply minimum intergreen times in the form of an intergreen matrix; the program does the rest and calculates all possible optimum stages and stage sequences. From this starting point, the program then produces sets of individual phase timings that maximise capacity and/or minimise delay. Phase delays and repeated greens are automatically handled by the program.

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can produce phase and stage timings very easily by providing an intergreen matrix and traffic flows, removing the need for the user to manually input stages and sequences. At large or complex junctions, the best stage sequences are difficult to find manually, so OSCADY PRO's automatic process is invaluable. It can often identify solutions that may otherwise have been overlooked and give superior performance in terms of capacity/delay.

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allows the user to input stages manually when an existing junction is being evaluated or when it is necessary to force a particular stage.



## Advantages of OSCADY PRO

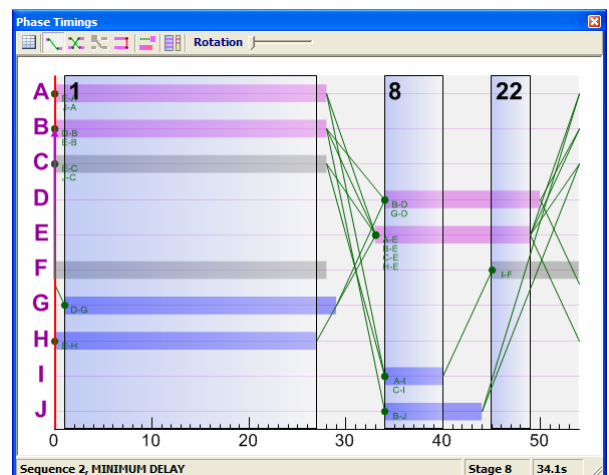
- Stage and sequence generators
- Optimises for three objectives: Critical cycle time, maximum capacity and minimum delay
- Filter lanes / indicative arrows, short (flared) lanes and opposed right turners can all be modelled
- Geometric delay calculated for each traffic stream
- Accident prediction for 3 and 4-arm urban junctions
- Phase constraints can be added to force pairs of phases to start/end together
- Multiple demand sets can be defined, with each profile specified as either ODTAB, LEVELS, FOUR, DIRECT or FLAT. Each set can be defined in terms of a relationship to another set, which is automatically re-calculated
- Automatic lane grouping – the program can analyse traffic streams and flows and suggest the optimum arrangement of lanes and streams
- Time varying flows can be modelled
- Evaluation mode (allowing existing timings to be analysed)
- Drive-on-the-left / drive-on-the-right
- Saturation flow estimation for each traffic stream
- Phase timings can be shown to an accuracy of 0.1s
- Provides an output compatible with the TR2500 form used to specify controller configuration.



## Graphical User Interface

- Highly visual and dynamic GUI.
- Junction Diagram – shows the junction in graphical format and includes queue animation, signal states, phases, stages, and results such as delay for each stream. The junction diagram allows a new junction to be built graphically

- Phase timings diagram – shows phase and stage timings graphically, along with phase delays and intergreens
- Graph Generator – Allows any result (effective green time, delay, etc) to be plotted against any input parameter (cycle time, sat flow, etc). This serves as a very flexible sensitivity analysis tool
- Report Generator – reports are generated in HTML, in a format that can easily be pasted into a word processor or spreadsheet Undo/redo allowing stepping back through up to 100 changes
- Quick edit mode – allows main data to be edited in a spreadsheet format
- Export to TRANSYT
- Importing from LINSIG and OSCADY Classic



## Minimum System Requirements

Windows XP/Vista

450MHz processor or better

RAM - same requirements as Windows XP

Colour monitor (256 colours in 800x600 video mode)

20MB available hard disk space

## Further Information

**TRL Software**

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