TRLSoftware

TRANSYT

## Signal Design for Junctions & Networks

TRANSYT is a macroscopic software package for designing, evaluating and modelling everything from single isolated road junctions to large mixed signal-controlled and priority control traffic networks.

Why use TRANSYT?

Signal timings at road junctions have an important effect on levels of traffic congestion, both at the junction itself and at surrounding junctions which may be signalised or priority-controlled. Ensuring traffic signals are timed effectively is one of the most cost-effective methods for reducing congestion.
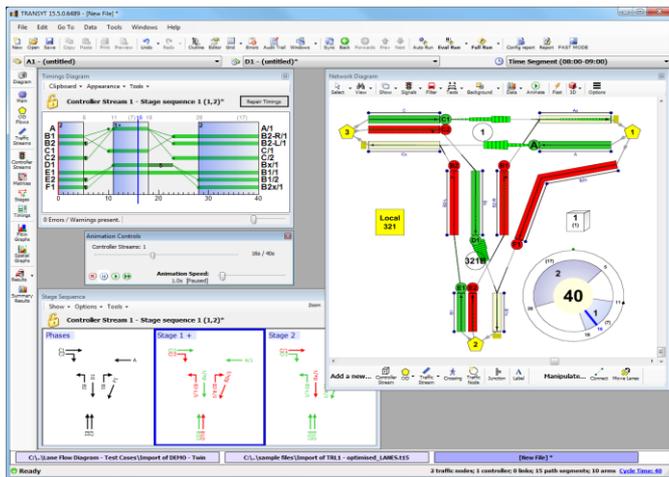
TRANSYT is a comprehensive global product used for optimising traffic signals at single junctions and large traffic networks of mixed control. It is designed specifically to give quick solutions with minimal user input, and also more considered solutions when needed.

TRANSYT modelling can feed into many processes - Its signal plans used for fixed time signals; cableless linking facilities; SCOOT base timings; vehicle actuation maximum timings and also used to predict the performance of the aforementioned.
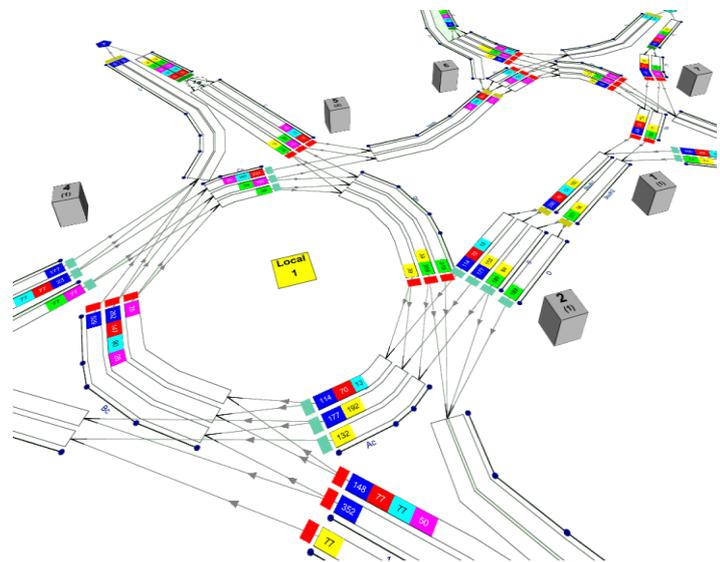
Who uses TRANSYT?

Used across the globe by traffic engineers, traffic modellers, junction designers, students and tutors, working for local authorities; municipal, state and regional authorities; consultancies of all sizes from multi-nationals to the smallest businesses; universities; other educational establishments.

How TRANSYT Works

A detailed traffic model calculates a Performance Index (an economic cost, based on stops and delays) using traffic flows, turning proportions, and network structure information

TRANSYT runs an optimisation process that adjusts the signal timings with the objective of minimising the Performance Index.

What can TRANSYT model?

TRANSYT can model mixed networks of signalised and unsignalised junctions. Furthermore, when used in conjunction with a **Junctions** licence, it has the capability to predict the performance of priority junctions using standard ARCADY PICADY geometric data.

Key Modelling Features

- Evaluate performance of existing layouts and signal timings and investigate future scenarios
- Model multiple scenarios of peak traffic flows and associated signal strategies within one file
- Model signalised, partially signalised and priority roundabouts within one file
- Extensive control of flow allocation process
- User Equilibrium Assignment of flows
- Stage-based and phase-based optimisation
- Choice of optimisers to establish multi-directional 'green waves'
- Comprehensive set of options to control the optimisation process in order to maximise the performance of corridors
- Modelling of short bays
- Model repeated greens or multi-cycled streams
- Modelling of time-varying flow conditions
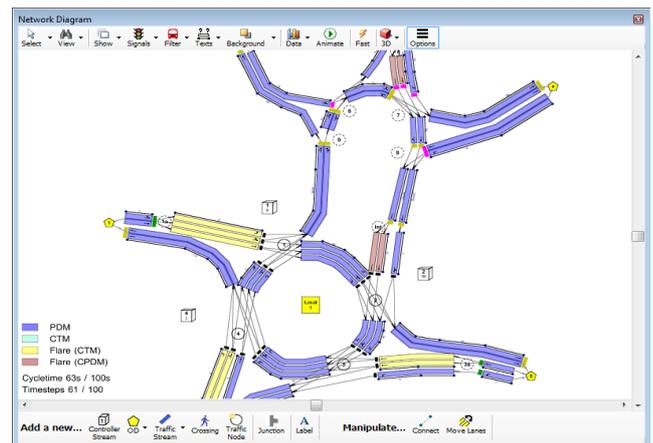- Cycle time optimisation

Adaptive Control Integration

TRANSYT can import SCATS traffic-flow data for the purpose of optimising offsets and signal timings. Likewise, SCOOT traffic flow messages can be imported to utilise live and up-to-date traffic flows.

Key User Interface Features:

- Interactive diagram / synced data entry screens
- Fast data-entry, including various auto-calculated data items derived from scaled diagram
- graphical lane-flow overlays for ensuring optimum junction layout and lane designation
- Combined flow/queue animation of vehicular traffic and signalised pedestrian crossings.
- Library files provided to ensure a quick junction setup and to illustrate modelling opportunities
- Auto-calculation of conflicts and intergreens
- Auto-calculation of RR67 saturation flows
- Customisable performance analysis graphs
- Automated audit-trail facility
- One-click production of publication-ready reports
- Report export to PDF or Word format
- Runs on the latest Windows platforms

International Use

TRANSYT is suitable for drive-on-the-left and drive-on-the-right conditions. TRANSYT also has a number of features to extend its appropriateness in different countries, such as TRANSYT's alternative Chilean traffic model, SCATS® split times, turn-on-red flow and alternative user-interface terminology