

TRANSYT 12 – New features by the Dozen!

TRL's signal co-ordination program, TRANSYT is used by hundreds of consultants and local authorities around the world. They will all be glad to know that the latest release, TRANSYT 12, is about to be launched. The Software Development Unit at TRL has listened to its customers and we have taken the opportunity to add some major enhancements to TRANSYT which we believe will be welcomed by everyone.

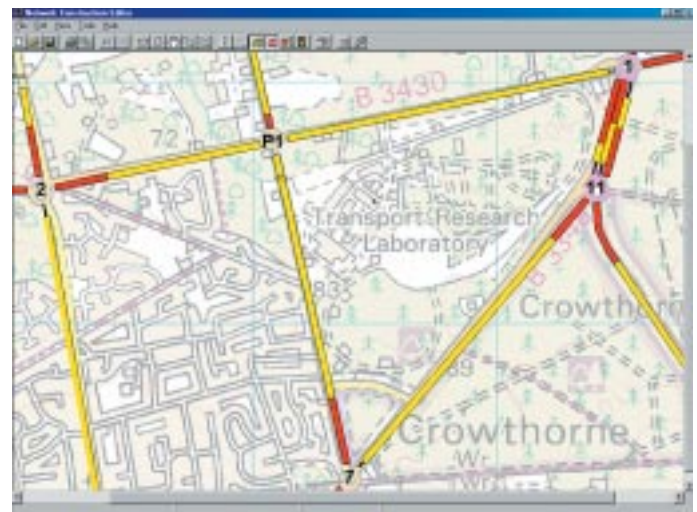
Read on (and look at the pictures!) to see what you get when you upgrade...

...or what you'll be missing out on if you don't!

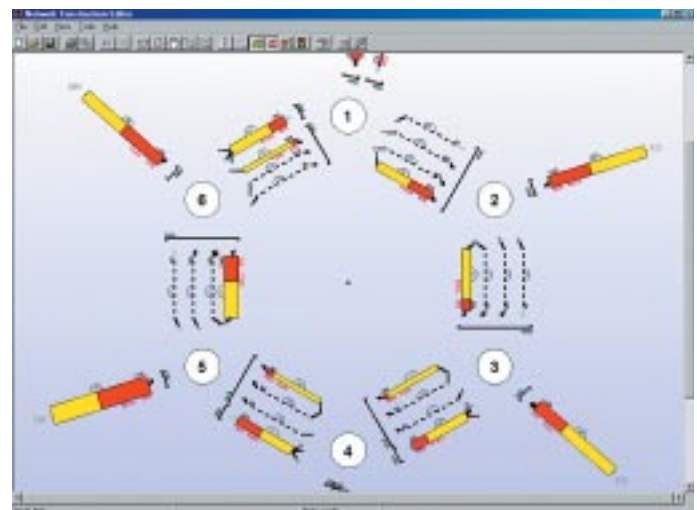
Multi-featured network diagram creation:

An integrated facility that allows the user to create a graphical representation of the network and display modelling results on it, including:

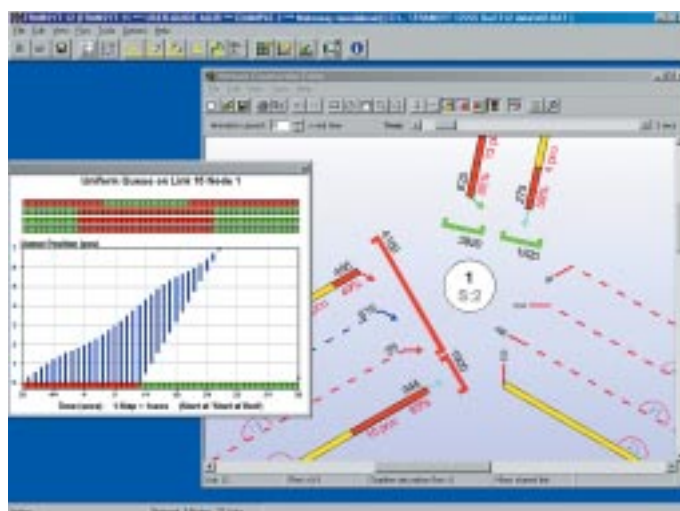
- all flows, flow directions
- all queues and link capacities
- links scaled to show real link lengths and to indicate relative traffic flows
- degrees of saturation
- animation of links on green/red (user-selected speed, including real-time)
- animation of uniform queue position and length for each step of the cycle
- animated flow direction indication
- link-to-link connector indicators
- indication of downstream links and TRANSYT user-defined routes
- bendable links
- network superimposed on a background graphic
- zooming, panning, and searching
- two view modes (detailed or simplistic)
- printing of network diagram features and results
- a multitude of other user options to maximise the clarity of results.



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Link Lengths View with background image (showing queue lengths)



Signalised roundabout in Network Construction Editor



Queue Graph and detailed Network Diagram View (showing links on red and green)



Vehicle emission model :

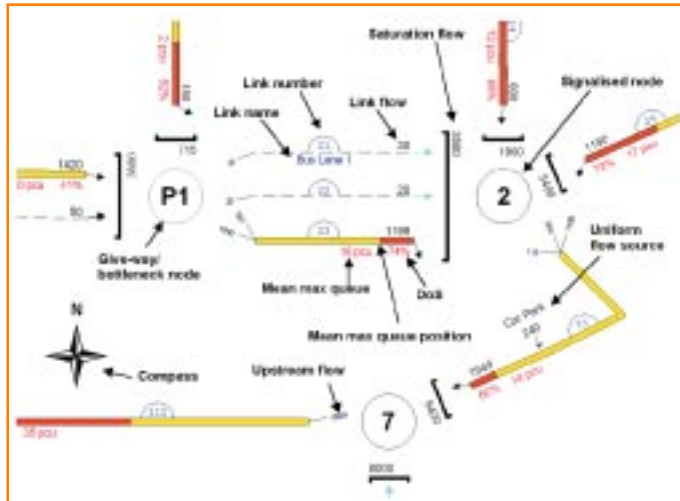
An average speed emissions model, based on TRL research and a new DMRB model (Design Manual for Roads and Bridges, Volume 13, Section 3, Part 1), uses the average vehicle speed along each link, link lengths and traffic flow data to produce vehicle exhaust emission predictions for every link within the network. The results are also calculated for the whole of the network and any defined 'routes' within it. Emission predictions are shown for five emission types (e.g. CO₂) in several tables. Rates of emissions are given in grams/hour, grams/vehicle/hour and grams/kilometre/hour.

Extended data ranges:

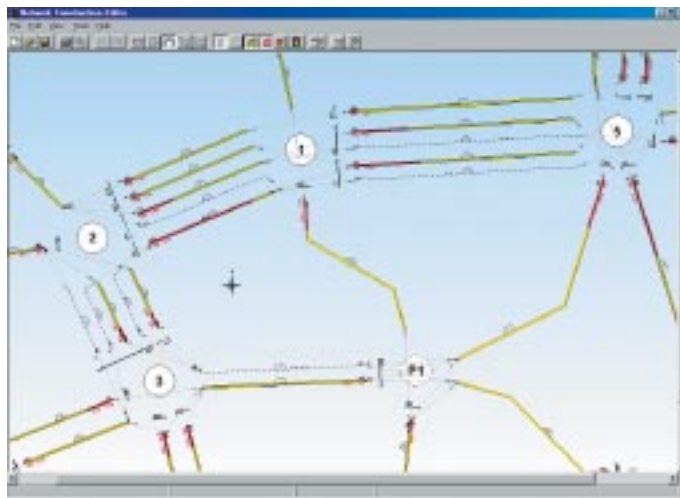
TRANSYT can now model up to ten stages per cycle – previously seven. This also allows junctions with up to five stages to be double cycled – previously three. The maximum number of steps in a cycle has been increased from 60 steps to 300 steps. This allows, for the first time, a guaranteed one-second model resolution for the longest of cycle times.

User defined 'routes':

Any number of 'routes' can be specified within a network by selecting subsets of links within the network. This facility allows vehicle emissions associated with a particular route to be calculated, and has other benefits – TRANSYT produces results for each route, which were previously only calculated for the whole network, e.g. average speed.



Main components of a NetCon diagram



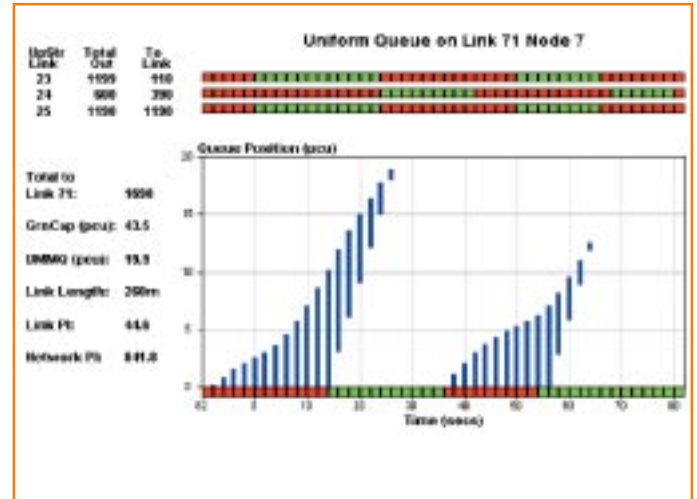
Network Construction Editor: Detailed Network View

Revised Queue and PI graphs:

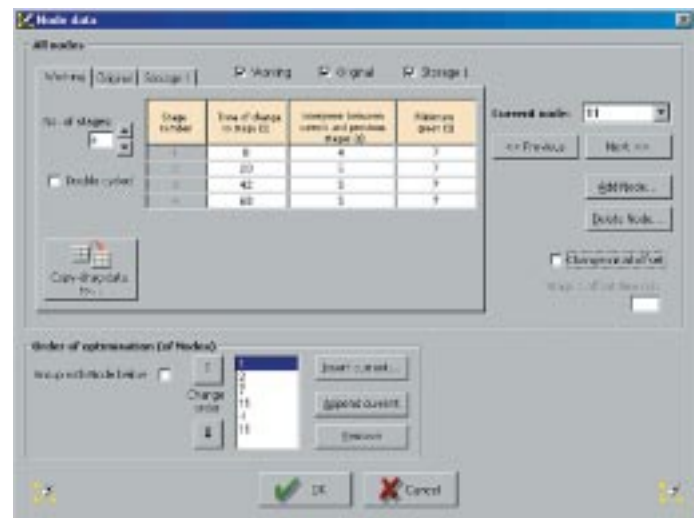
These graphs have been updated to take account of the increase in the maximum number of steps in a cycle and are much improved now that they are integrated into the graphic interface.

Revised Node data screen:

Three sets of node data (stage change times, number of stages, and double-cycling) can now be stored within the data file. This allows the user to retain an 'original' stage data set while the 'working' set (equivalent to TRANSYT 11 stage data) is overwritten when EQUISAT is used. TRANSYT 12 also provides the option of overwriting the 'working' set with the final signal timings calculated by the TRANSYT optimisation process.



Revised Graph Generator



Revised Node Data Screen

Jim Binning
 Email: jbinning@trl.co.uk

Strategic Transport Modelling Seminar - November 20th 2003

A date for your diaries - TRL's annual Strategic Transport Modelling seminar will be held again at TRL Crowthorne on Thursday 20th November 2003. This event always proves popular and this year will be no exception. In addition to bringing you up to date with modelling developments at TRL, there will also be the usual interesting mix of invited speakers from government, consultancy and academia. For a booking form, please contact the TRL Software Bureau.

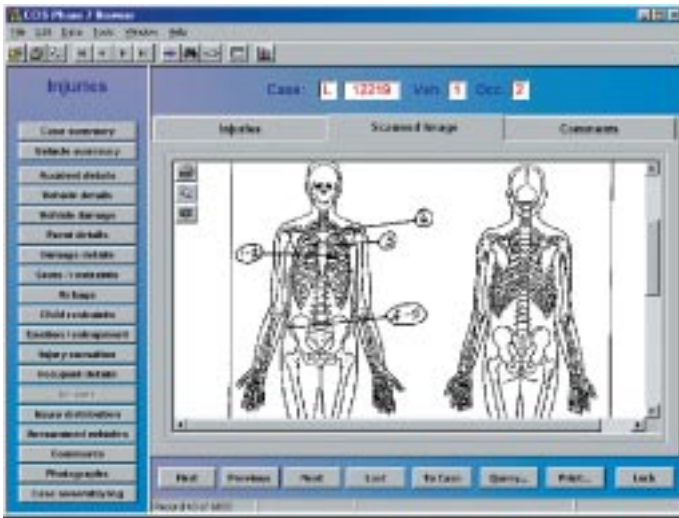
2003 UK CONTRAM Forum - December 1st 2003

This year's forum will be held in London at the Institution of Electrical Engineers, Savoy Place, on Monday 1 December. The day will include the latest news on CONTRAM developments and applications and talks on the new Variable Demand Modelling Advice (VaDMA), released by the Department for Transport, and the associated DIADEM software that has been developed with CONTRAM.

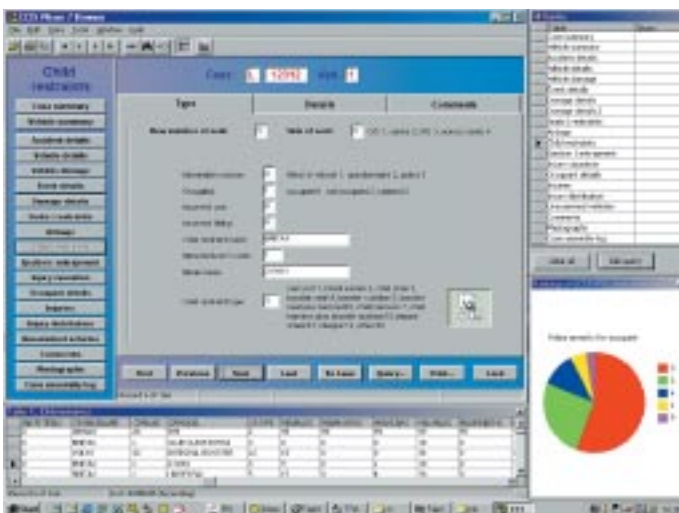
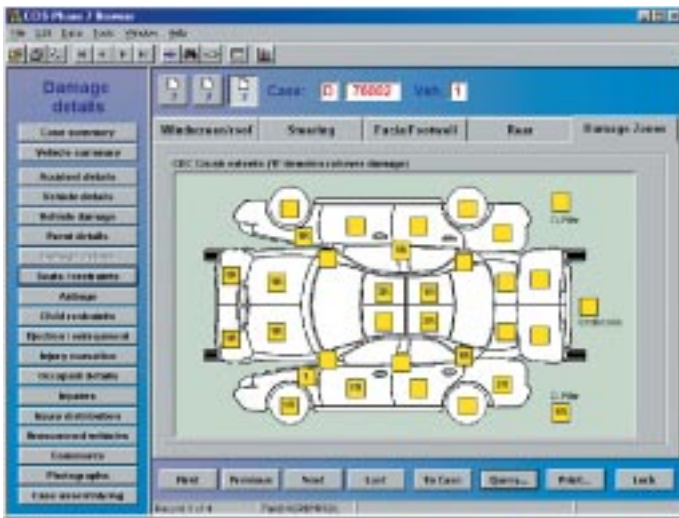
For further details contact Chris White at cdw@mmwinc.mottmac.com, tel 01962 893164.

Co-operative Crash Injury Study

New browser and data input systems for the Co-operative Crash Injury Study (CCIS) have recently been completed by TRL. The new set of software replaces the previous systems and is fully compatible with the most recent crash data specification.

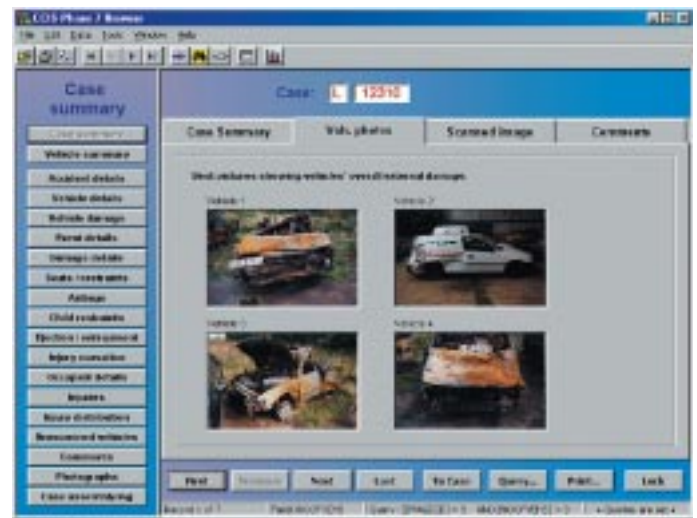


The Co-operative Crash Injury Study (CCIS) is concerned with the analysis of road traffic accident injury data collected from approximately 1,500 vehicles (and their occupants) each year. Crashes in seven separate areas are investigated, selected using criteria that are biased towards fatal and serious crashes.



The study started in 1983, and is now in its 7th phase. It currently has 8 Sponsors, from government and the automotive industry (see panel). Each of the sponsors uses the CCIS data as part of their research and development strategies. TRL is the Project Manager for CCIS and as such is responsible for the quality of the data and the continuing production of the cases.

Once a case is selected for inclusion in CCIS, a retrospective examination of the vehicle is carried out, questionnaires are sent to the individuals involved in the accident and injury details are obtained. (Data collection is subcontracted to research units at Birmingham and Loughborough Universities and the Vehicle and Operator Services Agency (VOSA), which operates 5 teams). This information is then



processed and the injuries are correlated against the damage to the car. After verification, the data is appended to the database, with each accident case comprised of up to 800 data items.

The new Browser software enables users to quickly and easily examine and print cases, perform complex queries and carry out simple data analyses. Each accident case includes photographs of the damaged vehicles and a number of sketches and diagrams, which can be browsed and viewed from within the software. The opportunity was also taken to present data in a more graphical way, and to include nomenclature reminders and diagrams wherever possible.

The associated Data Input software includes a management system that allows users to create new crash cases and track their progress through to completion and dispatch. The data entry process is aided by the automatic generation of diagrams, injury codes and other calculated fields, full validation rules and checks and many other enhancements.

For further details about the CCIS project, please see the dedicated website at www.ukccis.org.

CCIS SPONSOR LIST

Department for Transport
(Vehicle Standards and
Engineering Division)

Autoliv
DaimlerChrysler

Ford Motor Company
LAB

Nissan Motor Company
Toyota Motor Europe
Visteon

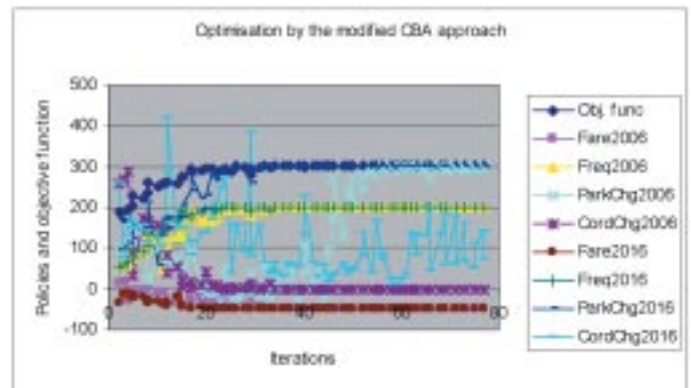
Graham Burtenshaw
Email: gburtenshaw@trl.co.uk

TRANSPORT POLICY MODEL USED TO 'DESIGN OPTIMAL TRANSPORT STRATEGIES'

TRL is currently using its Transport Policy Model (TPM) to inform the design of 'optimal' transport strategies. The research project, funded by EPSRC and carried out in partnership with the Institute for Transport Studies at the University of Leeds, is using TPM to enhance our understanding of urban transport and land use systems and, through this, to develop guidance on the design and implementation of integrated land use/transport strategies.

The project involves defining an objective function within TPM, and then allowing the model to 'search' for the optimal levels of transport policy levers to maximise the objective function using an optimisation algorithm. Different forms of objective function are assessed, including conventional cost-benefit assessment, and a target achievement approach. At the present time, TPM has been applied to six UK cities to test the various design approaches and to identify optimal transport strategies. As part of the study, the local authorities from the cities are assisting in defining available local policy levers and local transport plan targets, and assessing the acceptability of the optimal strategies.

Later work will include researching the interaction between land use and transport, which may lead to a modification of the optimal transport strategies. To meet this objective TRL is developing a simple land use model within TPM to model land use / transport interaction dynamically.



An illustration of the optimisation process for a modified cost-benefit assessment approach, including the policy variables and objective function.

For further information contact: Dr Xiaoyan Zhang, xzhang@trl.co.uk

MAAP for Windows - around the world in 2002/03

TRL's road accident database and analysis package (MAAP) is continuing to do well with strong recent sales abroad and in the UK.

Notable overseas installations and training have included jobs for the World Bank and local agencies in Indonesia (March 2002), Asmara (capital of Eritrea, October 2002), and also in Vietnam (April 2003). TRL also completed installation and training for PLUS, a private company maintaining expressways, in Malaysia in September 2002. In addition, an installation in Cyprus for the government and police has recently been completed. Several large contracts for new installations are nearing finalisation with a number of countries.

In the UK, the Metropolitan police purchased MAAP in 2002, as did Vale of Glamorgan Council, with Cardiff County Council in the process of purchasing the package within the last month. Strathclyde Police have ordered four additional copies, with West Mercia extending use of MAAP to outlying divisions within their area.

TRL has supplied refresher courses on using MAAP to the Isle of Man government (held at TRL in Crowthorne) and to Fife Police and Council (held in Kirkcaldy, Scotland). The short courses served to assist current MAAP users with tasks they had already been performing, but also introduced a number of new users to the package. Feedback from participants indicated that they viewed these courses as being extremely useful.

MAAP is a database system which can be used to input data from accident forms. It has been designed to improve data capture as much as possible. It also has some sophisticated analysis facilities that are used to produce summary statistics at a national level and also to assist safety engineers to identify hazardous locations and possible contributory factors at these sites.

The package is often used overseas as a tool for institutional strengthening, in addition to its primary role of improving road safety. In the UK, the STATS19 accident proforma is well established and universally used. MAAP is often introduced in conjunction with

a new or radically changed accident recording form in developing countries. In Eritrea for example, training brought together personnel chiefly from Land Transport (Ministry of Transport and Communications) and the police. Successful MAAP installations rely on the co-operation of a large number of official departments. Since the aftermath of road accidents have multi-sectorial implications (from health to policing through to judicial), the data should ideally be available to a wide range of organisations. MAAP installations overseas are an ideal vehicle for improving communication between official bodies, and are often an integral part of a larger programme of road and transport improvement.



MAAP Training session for Indonesia

John Fletcher
Email: jfletcher@trl.co.uk

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Laura Meikle
Email: lmeikle@trl.co.uk

ANNUAL USER GROUPS - NEW LOCATION!



After two years in Birmingham, the annual TRANSYT, ARCADY/PICADY and OSCADY User Group meetings are moving to York. In the Knavesmire Manor Hotel we have found a very attractive location for the User Groups, and we hope that moving around the country will continue to increase attendance. As usual, the User Groups will be held in November - for dates see the courses, workshops and seminars box on the back page.

The User Groups are the forum through which senior/experienced users can help direct the future development of the products, as well as an opportunity to learn more about them. The more input from users, the better the groups will function. We are seeking contributions from users prepared to make short presentations. If you would like to make a presentation, contact John Peirce (jpeirce@trl.co.uk or tel. 01344 770032). TRL will cover travel expenses for those making presentations.

All current maintenance contract holders are entitled to two free places per licensed site. So, a corporate licence holder with 10 registered sites could theoretically send 20 people, two from each site. Application for places can be made by E-mail to the Software Bureau, softwarebureau@trl.co.uk, through the software web site, www.trlsoftware.co.uk, or using the fax back form included with this issue of Traffic Software News.

John Peirce
Email: jpeirce@trl.co.uk

Making use of available resources



This roundabout was spotted on the Island of Ischia, in Italy, Is this the smallest roundabout ever? (or do you know different?) and it surely gets top marks for being environmentally friendly!

HAS YOUR TELEPHONE NUMBER OR EMAIL ADDRESS CHANGED?

(or any other address details or contact names)

If so, please complete the enclosed 'Change of Details' form and fax it back to us here at the Software Bureau. Also tick the box to subscribe to our software mailing list. Alternatively complete the 'change of details' form on-line at our website.

CAN WE HELP YOU?

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- Review TIA
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- Traffic Signal Design
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TRL Safety Consultancy Services

- Accident Prediction Models
- Route Treatment
- Safe Route to Schools
- Safety Audit
- Speed Management
- Traffic Calming
- Accident investigation and Litigation

COURSES, SEMINARS & WORKSHOPS 2003

TRANSYT 11

2 DAY WORKSHOP
23rd-24th September 03
Course Fee £500
(£450 Maintenance Holders)
if first fully booked, the 2nd
course will be held on
25th - 26th September 2003

ARCADY 5 & PICADY 4

A 2 DAY WORKSHOP
7th-8th October 03
Course Fee £500
if first fully booked, the 2nd
course will be held on
9th - 10th October 2003

SCOOT

A 2 DAY WORKSHOP
22-23 October 03
Course Fee £650
All prices exclude VAT

TRANSYT USER GROUP

11th November 2003

ARCADY/PICADY/ OSCADY USER GROUP

12th November 2003
Knavesmire Hotel, York
See Page 5 for more info

STM SEMINAR

20th November 2003
TRL Crowthorne
See Page 2 for more info

2003 UK CONTRAM FORUM

1st December 2003
Savoy Place, LONDON
See Page 2 for more info

TRAFFEX PRIZE WINNER



John Martin (right) receives his prize from TRL's John Peirce.

John Martin, Sustainable Transport Manager at the Royal Borough of Kingston was the lucky winner of the Palm m515 offered as a prize on the TRL stand at Traffex in April. The prize not only included the Palm, but also a copy of the "Traffic Engineering Software BUNDLE 3" software for making on street traffic measurements with his newly won PDA. The programs included in BUNDLE 3 are "SATFLOW" for measuring saturation flows and lost times at signals, "MOVASPEED" for measuring the "cruise speeds" needed by MOVA on the approaches to signals and "CFP" for measuring the cyclic flow profiles of traffic platoons in fixed time co-ordinated signals. Also included is a new program - "STC", standing for Synchronised Traffic Counter, which allows more than one Palm Powered® device to be used to conduct time-synchronised flow counts, so in situations where flows measured at different points need to be accurately matched in time, STC is the method to use. STC also allows other simpler types of traffic counts to be conducted.

For John Martin, the prize is particularly useful, as senior staff at the Royal Borough of Kingston are already using PDAs for management functions. The prize has awoken their interest in using them for technical functions on street. Because of their light weight, small size and long battery life (over 30 hours continuous operation), PDA devices such as the Palm pilot are exceptionally useful for making on street measurements of all types. For more information on BUNDLE 3, contact the software Bureau.

John Peirce

Email: jpeirce@trl.co.uk

CURRENT PROGRAM VERSIONS

ARCADY 5	V5.0 AD/1.1
PICADY 4	V4.1 AM/3.0
OSCADY 5	V5.0 AA/1
TRANSYT 12	V12.0AA/1

(All above have Right/Left capability)

TPM	V2.1
STM	V3.1
BUNDLE 3	V3.0 Issue 2
MOVASETUP	V 4.0c
CONTRAM 8	V 8.1f
MAAP for Windows	4.20
SafeNET	1.03
MTV	V1.2.85
PERS	V1.0

Who's Who in Traffic Software

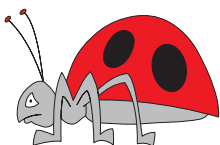


Andrew Ash

Dr Andrew Ash joined TRL in 1990. He is currently a Principal Scientist within the Software Development Group.

His earliest work was in land-use and transportation modelling, including the London Area Model and the microsimulation model MASTER. He has also worked on the development of TRL's traffic control systems MOVA, SCOOT and INGRID. In recent years he has played a major role in the design and development of TRL's multi-modal Strategic Transport Model (STM) and the Transport Policy Model (TPM).

BUG BOX



TRANSYT 11 All releases

See adjacent article
for details

TRANSYT 11 - All releases

In some cases the use of extremely small "preceding intergreen + minimum green" timings can cause the optimisation process to fail. Such failures are indicated by an overlap of the stage change times, e.g. stage 1 starts after stage 2. The forthcoming release of the analysis program (1.7) resolves this problem allowing values as small as 1 second to be chosen (Full Release Name: 11.1 AJ/1.7).



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