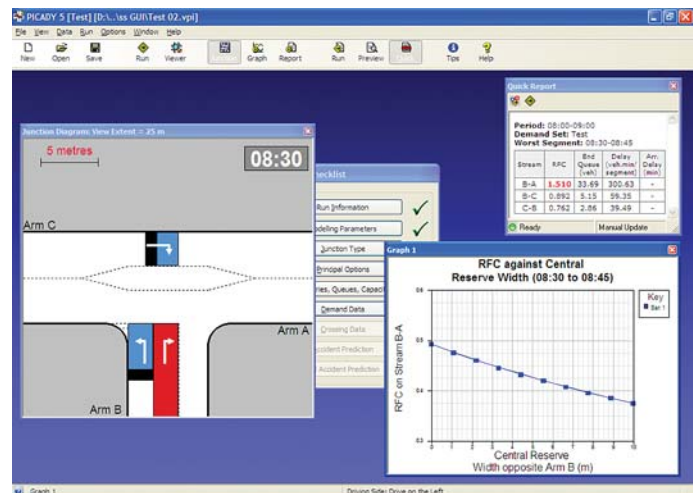


Give-way! Here comes PICADY 5

PICADY (Priority Intersection Capacity and Delay) is TRL's market leading software product for predicting capacities, queue lengths and delays at non-signalised major/minor priority junctions. It has been nine years since PICADY 4 was released, so we are very pleased to announce that a new version, PICADY 5, will be released on January 16th 2006. PICADY 5 will include a number of new features, including:

- Customisable graphical reports
- Graph generator
- Multiple demand sets
- Dual modelled time periods
- Capacity Pelican crossing model
- Calculated (average) arriving vehicle delay
- Point-to-point Journey Times
- Demand flow scaling factors
- Partial blocking of the main carriageway by right-turners
- Restricted-user tolerant implementation
- Quick dynamic on-screen report
- Several other miscellaneous improvements.

The main improvements can be split between two main areas - those relating to modelling capability and those relating to the presentation and calculation of results. On the modelling side a particularly useful feature is the ability to see likely (average) delay experienced by a vehicle arriving within a particular time period during the total modelled time period. The pelican crossing model (already in ARCADY 6) is now available in PICADY too. Furthermore, it has often been a problem trying to assess whether or not traffic turning-right from the main carriageway is going to block straight ahead traffic. Rather than the simple 'yes or no' approach of PICADY 4, PICADY 5 allows you to specify how many vehicles can queue before blocking will occur giving a better representation of the real situation and hence improved results.



The introduction of multiple demand sets in ARCADY 6 was a natural improvement to the program which has been implemented and improved in PICADY 5 – Dual time periods (e.g. am and pm peak) can be specified, with each demand set assigned to the relevant time period and PICADY 5 producing a report with both sets of results automatically for you.

On the presentation and calculation side there has been many new features and improvements. The report generator, inspired by ARCADY, provides you with graphical, customisable reports containing exactly what you want and leaving out what you don't want. Graphs from the new Graph Generator can be embedded into the report as well as all the standard output tables familiar to existing users of PICADY. Another feature, completely new to PICADY 5, is the very useful 'quick report' which presents on-screen fundamental output results changing dynamically as changes are made to the input data.

Issues concerning installation and user platforms have not been forgotten – work has been carried out to ensure that restricted-user environments are catered for better than before in PICADY.

For further details about PICADY 5 and to order your copy, please contact the TRL Software Bureau. Upgrade prices will be published on the TRL Software Website in January.

Jim Binning
email: jbinning@trl.co.uk

Demand Set:	Example 1 evening peak					
	Period: 17:00 - 18:00					
	Rising		Peak		Falling	
	Time	Flow	Time	Flow	Time	Flow
Arm A	17:00	010.00	17:20	023.00	17:45	007.00
Arm B	17:00	018.00	17:20	020.00	17:45	008.00
Arm C	17:00	015.00	17:20	017.00	17:45	005.00

Multiple demand sets and dual modelling time periods



Tackling congestion using TRL Software products

A recent article in TRL News (October 2005) by Dr. Tim Gamon, Director of Strategic Partnering, discussed the issues of congestion and TRL's efforts in developing innovative methods and policies for tackling them. The article lists a number of TRL Software products such as MTV, ARCADY, TRANSYT, CONTRAM, SCOOT and MOVA. This editorial provides a summary of Tim's article from a software perspective. TRL software products offer innovative solutions to tackling congestion problems common in urban and inter-urban areas. Take for example MTV (Motorway Traffic Viewer). The latest release (featured in TSN 34), MTV2 has been developed to meet the challenges of increasing traffic demand on motorways and the need to 'keep traffic moving' by identifying and evaluating congestion 'hotspots'. It achieves this by analysing and visualising motorway traffic and signal data obtained from MIDAS (Motorway Incident Detection and Automatic Signalling) loops. MTV takes the loop data, including signal settings and motorway geometry, processes the information in a specified form and produces detailed graphical outputs of the behaviour of traffic or operational performance of the controlled motorway systems.

Traffic congestion in urban areas is a growing problem and reducing such congestion through improved junction design and traffic control can be achieved by the use of TRL junction and traffic control products. TRANSYT offers an off-line capability for determining and studying optimum fixed-time co-ordinated traffic signal timings in any network of roads for which the average traffic flows are known. CONTRAM is a leading dynamic modelling tool designed to represent the varying traffic demand and congestion in urban and inter-urban areas (see Andrew Gordon's article on page 3). SCOOT and MOVA are real time adaptive systems for co-ordinating traffic signals, allowing efficient management of the network. See Ian Henderson's article on MOVA Development News, page 4.

TRL Software's Carshare Online is a web based product that allows employees from single, or many organisations to participate in carsharing. The system allows staff willing to share trips to contact others who live near to them and wish to travel at more-or-less the same time. It works automatically using company email which ensures security for those using the system.

POTENTIALLY MISLEADING REPRESENTATIONS

I have received a number of reports from TRL clients that an individual or company has been using TRL's name without authorisation, and potentially misleading people.

Specifically, what appears to be happening is that companies have been contacted by someone claiming to be from, or representing, the TRL Software Bureau, stating that they are planning to run software seminars or courses, and asking for a list of names of staff members who might be interested. The motivation for this activity is not clear. In one case, the caller claimed to be me!

I wish to make it clear that TRL Limited, and the TRL Software Bureau in particular, has no involvement in, or association with these activities.

I would recommend that if you or your staff are contacted by anyone purporting to be from the TRL Software Bureau, and you are at all unsure about the identity of the caller, please contact either myself on the number below, or the TRL Software Bureau on 01344 770758 (further contact details at www.trlsoftware.co.uk).

I wish to thank the consultancy colleague who brought this to my attention, and hopefully we can stop such potentially misleading representations.

If you wish to report any such activity to me, I would be very interested to hear about it.

**Glyn Rhys-Tyler BSc FCILT FIHT
Group Manager
Transportation Software Development
TRL Limited - Tel 01344 770543
E-mail grhys-tyler@trl.co.uk**

TRL continues to design, develop and market customer focused products, which not only tackle congestion but also cover the wider traffic and transportation issues. TRL also offers a range of consultancy services based on its software expertise.

Abs Dumbuya
email: adumbuya@trl.co.uk

TRL SOFTWARE TRAINING COURSES

It has been a very busy few months for TRL's software trainers, who have managed several successful training courses over the last three months on the TRANSYT, ARCADY and PICADY, and SafeNET software packages, with further courses planned in the coming months.

In a new departure for TRL, the TRANSYT and ARCADY/PICADY training took place off-site at the Moor Hall Conference Centre in Cookham near Maidenhead Berkshire. This is a residential location, giving delegates the opportunity to get away from their pressured working environment, allowing them to concentrate solely on training.

Aimed at beginners, the TRANSYT workshop on 20th - 21st September was well attended, attracting delegates from around the country, mostly engineers involved in the design and operation of traffic management and control in urban areas.



A view of Moor Hall

We also ran two residential "Introduction to ARCADY/PICADY" training courses during October/November, again aimed at beginners. Both courses were also well attended, and delegates learned how to model roundabouts, mini-roundabouts, unsignalised priority junctions using the latest versions of ARCADY and PICADY.

Lastly, training is available for SafeNET 2, TRL's latest software release which is an interactive and innovative software package to assist traffic engineers in the design of safer road networks. Held at TRL, the training will benefit road/traffic engineers involved in reducing accident casualties in local communities and/or on the trunk road network. The course will cover modelling of safe road networks and includes practical sessions and demonstrations of the application of SafeNET 2.

TRL Software can also provide bespoke training courses delivered at your premises or on-site at TRL - please contact the Software Bureau for details. To help us continue making improvements and extend our training courses, we welcome feedback on these services and information about your training requirements. You can do so by contacting the Software Bureau.

Ann Gledhill
email: SoftwareBureau@trl.co.uk

CONTRAM 8.3 is launched

As demand for travel increases and congestion occurs over longer time periods and larger network areas, planners and engineers require models that can reflect the complex travel behaviour in these conditions as well as new and innovative ways of controlling traffic.



CONTRAM has been the leading dynamic traffic modelling software used around the world for over 20 years. It has a wide range of modelling tools for representing a variety of situations from congested urban networks to regional inter-urban areas.

CONTRAM is designed to model the varying traffic demand and congestion that occurs during the day and will represent the peaks of congestion as well as off-peak conditions within a single model.

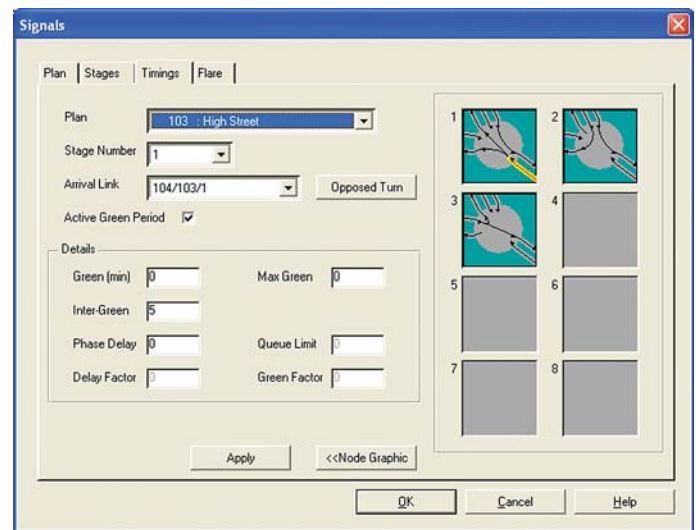
These features are combined with a graphical user interface. Building, running and analysing models can be done from a single fully integrated program. The 32-bit software operates on Windows 95, 98, 2000, NT and XP platforms.



The latest version 8.3 of CONTRAM has just been released. It introduces tutorial examples as well as significant new features.

For the first time a fully functional version of CONTRAM is now available completely free of charge for users who want to try before they buy, or wish to use it for educational purposes. The only restriction is that models are limited to 25 zones and it cannot be used for commercial fee-earning projects.

The tutorial examples guide new users through some common tasks such as adding links, running the assignment and displaying link data.



The evaluation and educational version of CONTRAM can be downloaded free from the website www.contram.com (follow the link from the home page).

Existing CONTRAM users will be pleased to see some much-requested new features in the latest version:

- Ability to cordon the network and demand matrix
- Insert a new node in the middle of an existing link
- Improved printing options, including print preview

For more information please visit the CONTRAM website (www.contram.com) or email contram@mottmac.com

Andrew Gordon
email: andrew.gordon@mottmac.com
and Nick Taylor, email: ntaylor@trl.co.uk

TRL Conference: *Intelligent Traffic Management and Control* and MOVA User Group - March 29th & 30th 2006

Location: Loughborough University - Conference call for papers

Following on from this year's successful 'MOVA and Adaptive Signal Control' conference held in Birmingham in February 2005, TRL are delighted to announce the **TRL Intelligent Traffic Management and Control Conference**, to be held on the 30th March 2006. Main topics will include MOVA, SCOOT and other signal control strategies, together with related traffic management subjects such as VMS, tolling, ramp metering etc. Papers from industry practitioners and academic institutes are welcome. Please submit abstracts to TRL (contact details below) by 16th January 2006.

Note that the biannual **MOVA User Group** will be held at Loughborough University on 29th March 2006. Overnight accommodation will be available for delegates who wish to attend both events. To book a place please contact the TRL Software Bureau.

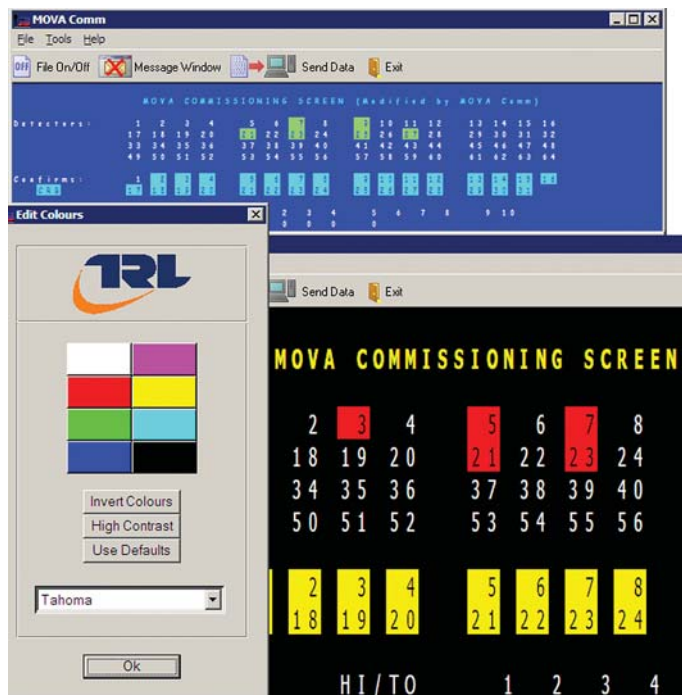
Contact Mark Crabtree
email: mcrabtree@trl.co.uk, Tel: 01344 770959

MOVA Development News

Availability of MOVA M5 (including Compact MOVA)

The latest version of TRL's adaptive traffic signal control system, MOVA M5.0, is now available from one of the MOVA manufacturers (Siemens), with the other manufacturers (Peek and Microsense) working on integration with their equipment. MOVA M5.0 is designed to be easier to use, with new configuration data functionality, expanded data capacity, and Compact MOVA facilities.

A document on Compact MOVA implementation (PPRO51 "Draft Advice for Users of Compact MOVA") is now available from the TRL software website, www.trlsoftware.co.uk. Following user requests, the website also includes a FAQ (Frequently Asked Questions) document, and the ability to subscribe to a MOVA mailing list.



MOVA Comm and MOVA Setup Updated

An updated version of MOVA Comm is now available on the TRL software website. Font sizes are scalable, allowing the terminal window to be maximised. The user can choose different colour schemes, for instance high-visibility black text on a yellow background; font face and boldness can also be set. Detector outputs on the MOVA M5 commissioning screen have been rearranged to make them easier to read. A few bugs have also been fixed; in particular, dataset downloads to older MOVA units are now more reliable.



MOVA in operation at a busy crossroads

An update to MOVA Setup is also available with minor modifications: remembering the last Windows folder that datasets were loaded from, and an alternative default set of assessment times. TRL is currently working on a graphical Windows version of MOVA Setup, which we are hoping to trial with users early next year.

Both MOVA Setup and MOVA Comm are backwards-compatible with older versions of MOVA, and are freely available from TRL's software website, www.trlsoftware.co.uk.

Linking MOVA to Microsimulations

A PC version of MOVA, "PCMOVA", is being developed for linking to the SIAS-PARAMICS traffic microsimulator. PCMOVA will allow MOVA users to test and simulate datasets in advance of application on-street, and will allow transport planners to accurately model MOVA junctions in their microsimulation models. PCMOVA and the interface to S-PARAMICS will be on sale from early 2006; interfaces to VISSIM and other microsimulations are scheduled to follow later in 2006.



MOVA development is all-go!

Next MOVA release

TRL has been working on the next version of MOVA, which is funded by the MOVA Development Group (a group that includes the UK Department for Transport, Highways Agency, TRL, MOVA users, and MOVA manufacturers). The next version of MOVA includes the following functionality:

- Pedestrian cycle time limitation facility: the ability to limit the cycle time at a junction when a pedestrian demand is present. There are two modes of operation: for under- and over-saturated periods.
- Saturation flow measurement module. This will be used for measuring saturation flows and logging the results so that the algorithms used can be validated during street trials (they have already been tested successfully in simulation).
- Cruise speed data collection. Functionality has been added to record patterns of detector activations, which TRL requires for further development of a cruise speed measurement algorithm.

The pedestrian facilities have been trialed at a site in Surrey where the pedestrian priority feature was used as part of a DfT project titled "the effect of signal control strategies on vulnerable road users". The pedestrian cycle time limitation worked as intended, and the results of the trial are currently being analysed.

Ian Henderson
email: ihenderson@trl.co.uk

FAQ

This month's FAQ brings you a small selection of Frequently Asked Questions concerning TRANSYT



I have a small network of signalised junctions that are quite a distance from each other. Is there a particular distance (or rule of thumb) beyond which coordinating the signals using TRANSYT is of no benefit?

No – there is no particular distance. The usefulness of TRANSYT will depend not on the distance between junctions but on how much the platooning of traffic remains intact along the link by the time it reaches the downstream stop line. Platooning is affected not just by distance but also by the amount of skin-friction along the link due to characteristics such as the presence of parked cars, bends or minor sources and sinks. The presence of more significant priority junctions can also contribute to this if they add significantly to the traffic already on the link. Although in this case you would probably want to model the give-way within TRANSYT too. Platooning is also significantly affected by the nature of the upstream junction. Good platooning is likely only if there is a dominant movement at that junction.

The only sure way to know how intact platoons remain along a link is to go out on-street and see what is actually happening. N.B. TRL's Traffic Engineering BUNDLE 3 software contains an easy to use program called CFP to collect cyclic flow profiles on street using a Palm-OS PDA. The degree of platooning is easily seen from the output of CFP. Within TRANSYT itself the degree of platooning is indicated by the value of MME (Mean Modulus of Error). The MME value is given in the cyclic flow profile graphs. Whilst platoon dispersion due to differing speeds is modelled by TRANSYT, skin friction effects are not. So MME is a theoretical value. A value of MME close to its maximum of 2 indicates a high level of platooning so good coordination will be effective while a value of 0 indicates no platooning at all and hence no coordination benefits are possible. A 'rule-of-thumb' is that for any link with a MME value of 0.3 or less, it is probably not worth coordinating the signals. However, if on links, whether short or long, skin friction effects are significant, the MME value is not likely to be meaningful.



I have a problem printing from NetCon – every time I try to print directly to the printer the background image that is shown on the screen is missing. Why is this happening?

In order to ensure that the background image is printed along with your schematic of your network you must set the image to 100 opacity - Any other setting will result in the background image being ignored.



I have two parallel links in my network (with the same link length) – one for general traffic and the other is an adjacent bus link. Having looked at the relative cruise times I have noticed that despite accounting for different cruise speeds and the bus stopped time there still appears to be a large discrepancy in the cruise time shown in the output. Why is this?

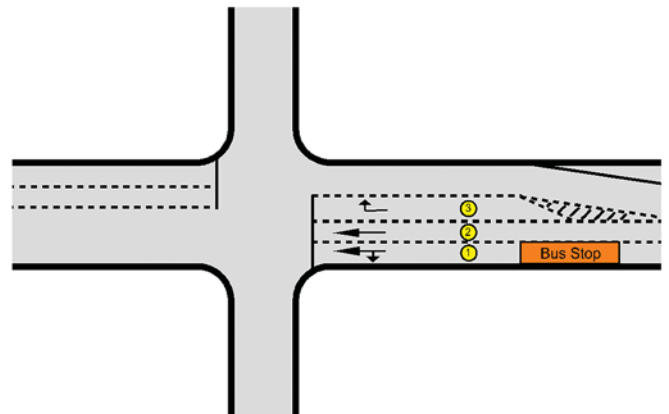
On top of the user-specified standing time of the buses on that particular link, TRANSYT adds on additional time (to the cruise time) to account for the deceleration and subsequent acceleration back up

to the cruise speed on links that have bus stops. This time depends on the link length and cruise speed specified. E.g. the time taken to accelerate and decelerate is deemed to take about 16 seconds as long as the link can fully accommodate this manoeuvre within its length. For short links this time will not be accommodated and hence the additional time lost due to acceleration/deceleration will be less as a result. With a specified cruise speed of 30 km/h on a link which is over 60 metres long, this extra time is close to 9 seconds.



I would be grateful if you would advise on the most appropriate way to model the situation shown on the attached drawing. Lane 3 is modelled as a separate (give way) link. You will note there is a bus stop in lane 1, 38m from the stopline. There are approximately 20 buses per hour using this stop. Would you advise that lanes 1 and 2 should be modelled as a flared link? If so, what length of flare would you suggest, bearing in mind that there will not always be a stationary bus at the stop?

You are best to model lane 1 as a flare of lane 2. The number of buses is high and will be disruptive to traffic flow on lane 1 not only when a bus is stopped at the bus stop but also at any time it is in the bus lane. If you were to model the lanes as separate lanes you would need to reduce the sat flow on lane 1 to compensate but for this you would really need to know the flows on each lane separately to have any chance of selecting a suitable value of sat flow.



A compromise is needed to compensate for the fact that the flare is not always a flare! I suggest you increase the flare length of lane 1 to compensate. By how much you do this is the tricky bit. As a starting point, I would be inclined to compensate by looking at the proportion of time in which you consider lane 1 flow to be disrupted and then weight the link length and the space in front of the bus lane by the proportion, e.g. if lane one is affected by the presence of a bus for, say, a third the time then you could make the flare length equal to $(2/3 \times \text{link length}) + (1/3 \times \text{the space in front of the bus stop})$, or something similar. Then see if it is giving you reasonable results.

Jim Binning
email: jbinning@trl.co.uk

SafeNET 2 - last chance to buy at reduced prices

Special Introductory Prices for Purchasing SafeNET 2

Discounted prices are available for a limited time only and will expire on 31st December 2005.

See flyer for details or contact the Software Bureau.

TRAINING COURSES, SEMINARS & USER GROUPS 2006

TRANSYT

User Group
8th March 2006
at TRL, Crowthorne

2 day Training Course at Moor Hall Conference Centre Cookham, Maidenhead 25th - 26th April 2006
Course Fee £575 (£525 Maintenance Holders)

ARCADY & PICADY

User Group
9th March 2006
at TRL, Crowthorne

2 day Training Course at Moor Hall Conference Centre Cookham, Maidenhead 14th -15th March 2006
Course Fee £575 (£525 Maintenance Holders)

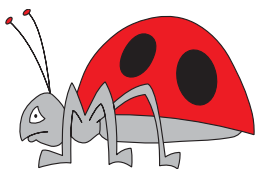
All prices exclude VAT

Contact the Software Bureau

TRL Software Bureau Christmas Holiday Period

The Software Bureau will be closed from 12.00 noon Christmas Eve until 9.00am 3rd January 2006

BUG BOX



No bugs to report this time

SafeNET 2 Launch Event Success!

TRL Launched SafeNET 2 Road Accident Prediction Software on the 12 October with a half day seminar on accident prediction and accident data management.



Attendees came from all over the country from Humberside to Dorset with representatives from Local Authorities, Police Forces, Transport Consultants, Department for Transport and the Highways Agency.

The event began with a talk by Tracy Savill, Head of TRL's Safety Group, on accident trends. The floor was opened for a lively debate on different approaches to accident prevention.

Interesting examples of how SafeNET can be used in planning and auditing were presented by Tim Hipwell, Collision Investigation Officer from Devon County Council and Richard Boswell, Traffic and Safety from InterRoute Area 4 Highways Agency Managing Agents.

The seminar ended with two colourful presentations by Paul Hobday from West Mercia Constabulary and Chris Baguley from TRL's International Safety Group talking about managing accident data using TRL's MAAP Software.

SafeNET 2 is available at a special introductory price until December 31st 2005, See www.trlsoftware.co.uk for more information.

Alice Crossley
email: acrossley@trl.co.uk

CAN WE HELP YOU?

TRL Traffic Consultancy Services

- Traffic Impact Assessment
- Review TIA
- Junction/Network Modelling
- Traffic Signal Design
- MOVA Verification Service, design and installation

TRL Safety Consultancy Services

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

CURRENT PROGRAM VERSIONS

ARCADY 6	V6.0 AC/3
PICADY 4	V4.1 AN/4
OSCADY 5	V5.0 AB/2
TRANSYT 12	V12.0 AD/4

(All above have Right/Left capability)

TPM	V2.1
STM	V4.4.5
BUNDLE 3	V3.1 Issue 4
MOVASETUP	M5.0.0
CONTRAM 8	V 8.3
MAAP for Windows	4.3.0
SafeNET	2.02
PERS	1.1
MTV	V 2.0

Who's Who in Traffic Software



Anna Booth

Anna joined TRL in August 2005 and is a member of the Traffic, Software, and Modelling Group in the Transportation Division. She has a BSc in Mathematics and Computer Science from the University of Nottingham, and an MSc in Natural Computation from the University of Birmingham.

Anna has worked on STM, traffic flow models in TRANSYT and is currently working on the next release of MOVA.



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