

Akcelik and Associates

Review of Activities During 2005

Rahmi Akçelik
Akcelik & Associates Pty Ltd

1 Introduction

This paper presents a summary of some of the research and development activities undertaken by Akcelik and Associates during 2005. These include:

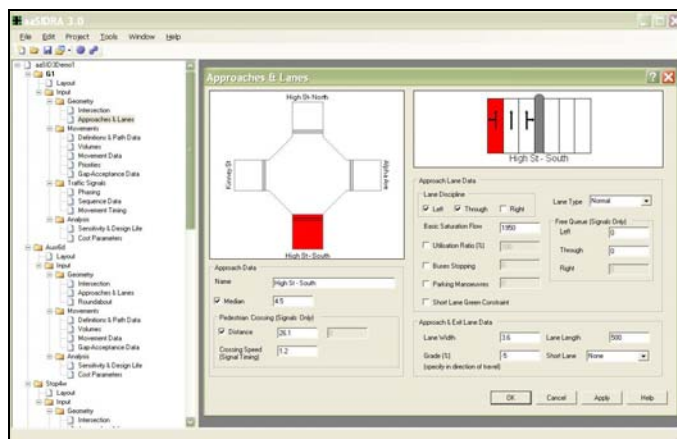
- Software development
- Software training
- ITE Annual Meeting, Melbourne
- Roundabout Conference in the USA.



2 Software Development

aaSIDRA version 2.1 was released in November 2004 (*1*), and incorporated many new features including major traffic model enhancements. Since then, significant progress has been achieved with the development of **aaSIDRA 3.0**.

In this major new version, which is being developed using Microsoft .NET Framework version 2, the RIDES input module will be replaced by input in full Windows environment. While based on the same principles, the input method in aaSIDRA 3 will be simpler yet more powerful.



Some preliminary testing of input dialogs has been carried out during aaSIDRA workshops held in Sydney and Perth. aaSIDRA 3.0 is expected to be released during early 2006.

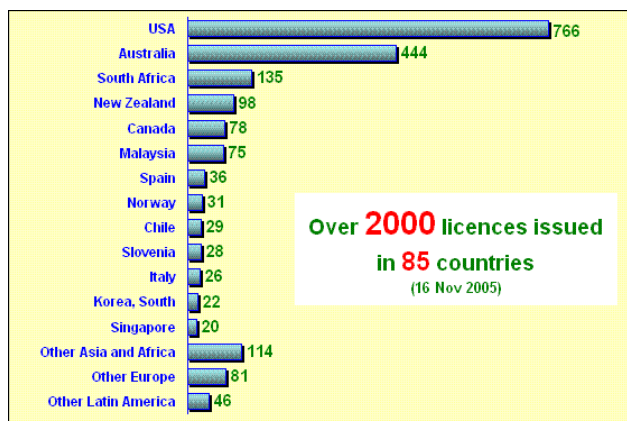
The development of the **aaMotion**, a single-trip microscopic simulation package for traffic assessment, has progressed further. aaMotion incorporates powerful text and graphical output with animation of vehicle movement and dynamic plotting of graphs. aaMotion is also expected to be released during early 2006.

Corresponding author: Rahmi Akçelik
Director, Akcelik & Associates Pty Ltd,
P O Box 1075 G, Greythorn Victoria, Australia 3104
Tel: +61 3 9857 9351, Fax: + 61 3 9857 5397
info@akcelik.com.au

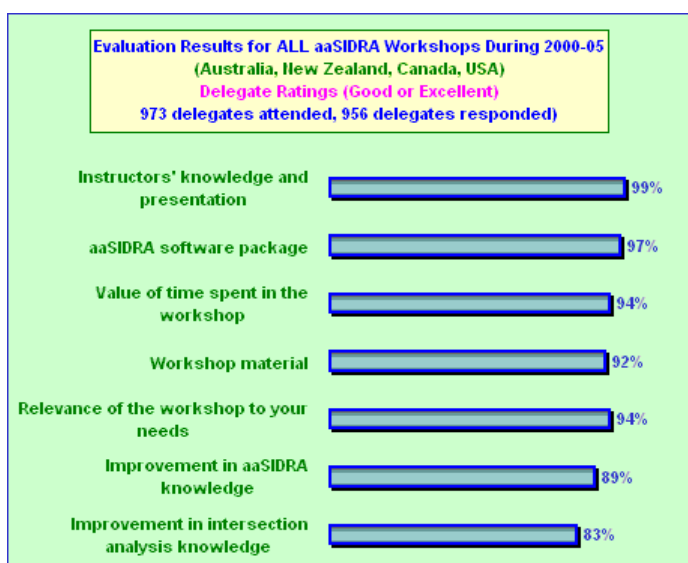
aaSIDRA User Status

The use of aaSIDRA increased at a high rate worldwide during 2005.

It has now reached well over **2000 sites** in **85 countries**. The number of aaSIDRA licences in the **USA** is now **over 760**, representing the largest user group in the world, followed by **Australia and New Zealand** with **over 540 sites**.



3 Software Training



During 2005, aaSIDRA training workshops were held in **Montreal, Canada, Denver, CO and Albuquerque, NM, USA, Melbourne, Sydney and Perth, Australia**. A total of **306 delegates** attended these workshops.

Since July 2000, Akcelik and Associates ran over **50 training workshops** with over **970 delegates** attending.

In evaluation of these courses, the trainees rated various aspects of the aaSIDRA training courses and the aaSIDRA software package very highly.

Further information:
www.aatraffic.com/SIDRA/training_courses.htm

4 ITE Annual Meeting, Melbourne

Akcelik and Associates participated in the ITE 2005 Annual Meeting and Exhibition held in Melbourne, Australia during August 2005.

aaSIDRA and aaMotion software packages were demonstrated at the A&A exhibition booth and various technical sessions. Dr Rahmi Akçelik chaired a technical session (Adaptive Signal Control) and participated in a Software Panel.



5 Roundabout Conference in the USA

Akcelik & Associates participated in the TRB National Conference on Roundabouts, Vail, Colorado, May 2005, presenting aaSIDRA at a software demonstration session, taking part in the exhibition, and presenting two technical papers (2, 3).

A short document was prepared (4) to compare the main features of three roundabout models, namely the Australian model as implemented in the aaSIDRA software, the TRL model as implemented in the UK software packages, and the HCM model (current HCM 2000 model as well as the NCHRP 3-65 research results).



A paper summarising the differences between the AUSTROADS Roundabout Guide (5) and aaSIDRA methods for roundabout analysis, and discussing some important aspects of the analysis method where significant differences exist, was published in the ARRB *Road & Transport Research* journal.

DISCLAIMER

The readers should apply their own judgement and skills when using the information contained in this paper. Although the authors have made every effort to ensure that the information in this report is correct at the time of publication, Akcelik & Associates Pty Ltd excludes all liability for loss arising from the contents of the paper or from its use. Akcelik and Associates does not endorse products or manufacturers. Any trade or manufacturers' names appear in this paper only because they are considered essential for the purposes of this document.

For further information on the subjects discussed in this paper, contact the author at rahmi@akcelik.com.au.

REFERENCES

1. AKCELİK & ASSOCIATES (2004). *aaSIDRA User Guide (for version 2.1)*. Akcelik and Associates Pty Ltd, Melbourne, Australia. [Available under aaSIDRA software licence only]
2. AKÇELİK, R. (2005). Roundabout Model Calibration Issues and a Case Study. Paper presented at the *TRB National Roundabout Conference, Vail, Colorado, USA*, May 22-25, 2005. [Available for download from www.akcelik.com.au/downloads.htm]
3. AKÇELİK, R. (2005). Capacity and Performance Analysis of Roundabout Metering Signals. Paper presented at the *TRB National Roundabout Conference, Vail, Colorado, USA*, May 22-25, 2005. [Available for download from www.akcelik.com.au/downloads.htm]
4. AKÇELİK, R. (2005). Roundabout Model Comparison Table. Akcelik and Associates Pty Ltd, Melbourne, Australia. [Available for download from www.aattraffic.com/downloads.htm]
5. AUSTROADS (1993). *Roundabouts*. Guide to Traffic Engineering Practice, Part 6. Association of Australian State Road and Transport Authorities, Sydney, Australia.
6. AKÇELİK, R. and BESLEY, M. (2005). Differences between the AUSTROADS Roundabout Guide and aaSIDRA roundabout analysis methods. *Road & Transport Research* 14(1), pp 44-64. [Available for download from www.akcelik.com.au/downloads.htm]