

Akcelik and Associates

Review of Activities During 2006

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1 Introduction

This paper presents a summary of the research, development, training and other activities undertaken by Akcelik and Associates during 2006. These include:

- software development,
- software training,
- research on roundabout metering signals, and
- conferences and other activities.



2 Software Development



Akcelik & Associates introduced **SIDRA SOLUTIONS** as a new brand that encompasses all software products. As part of this new branding, aaSIDRA became **SIDRA INTERSECTION**, and aaMotion became **SIDRA TRIP**, both featuring new logos and icons. The corporate image and email addresses have been changed, and the web site has been redesigned (under development). The new web address is www.sidrasolutions.com

The new-generation **SIDRA INTERSECTION version 3.0** was released during August 2006 (1). This version runs under the latest Microsoft .NET framework version 2, with all input in full Windows environment. There has been significant restructuring of input data, the defaults system, file management, configuration and other program facilities. There are many aspects of these changes that will affect the model use. The update version 3.1 that introduces various improvements in response to user feedback is due for release during December 2006. Development work towards the release of **SIDRA INTERSECTION** version 4 has started.

The development of **SIDRA TRIP** has progressed with improved facilities for the import of GPS data. This single-trip microscopic simulation package is now expected to be released during 2007.

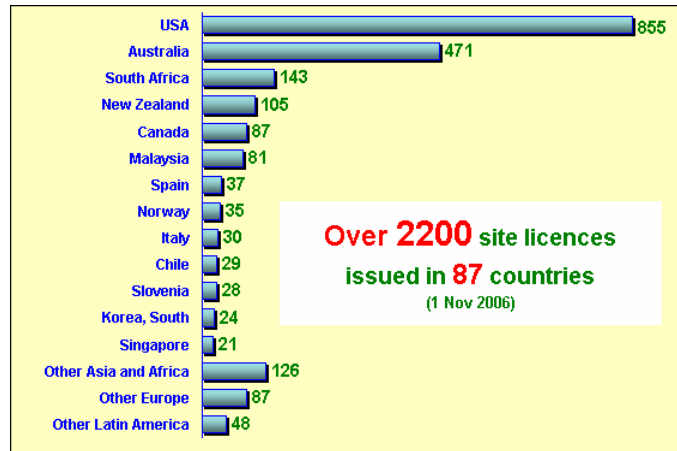
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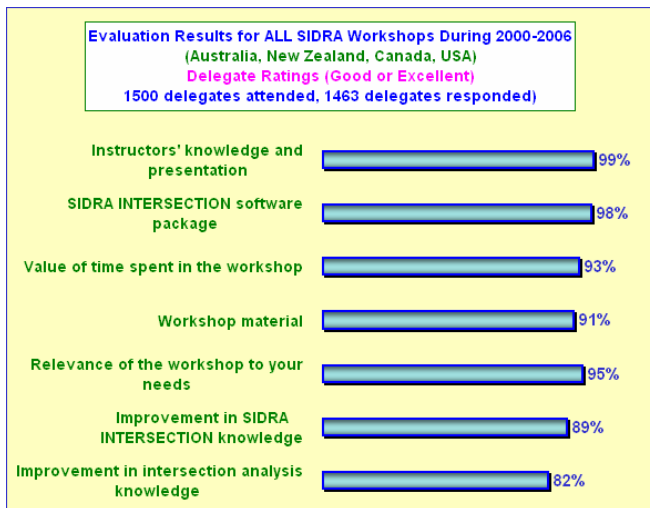
User Status

The use of the SIDRA INTERSECTION software continued to increase at a high rate worldwide during 2006. It has now reached well over **2200 sites** in **87 countries**.

The number of licences in the **USA** is now **over 850**, representing the largest user group in the world, followed by **Australia** and **New Zealand** with **over 570 sites**.



3 Software Training



During 2006, SIDRA INTERSECTION training workshops were held in **Melbourne, Sydney, Brisbane, Perth and Adelaide**, Australia, **Auckland and Hamilton**, New Zealand, **Calgary, AB and Vancouver, BC**, Canada, **Seattle, WA, Los Angeles, CA, and Salem, VA**, USA.

A total of over **550 delegates** attended these workshops.

Since July 2000, Akcelik and Associates ran over **60 training workshops** with **1500 delegates** attending.

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

4 Research on Roundabout Metering Signals

Akcelik and Associates was commissioned by VicRoads to conduct major research into the operational characteristics of roundabouts with metering signals. The objective is to improve current analytical techniques to reliably assess the performance of roundabouts with metering signals, and calibrate and validate these techniques for incorporation into the SIDRA INTERSECTION software. The research involved collection of extensive traffic data at five roundabout sites.

The research started in July 2006 and will be completed during December 2006.



4 Conferences and Other Activities

Akcelik and Associates participated in the following events during 2006:

- **Canadian ITE** Annual Meeting and Exhibition, Banff, Alberta, Canada, May 2006.
- **Transportation Research Board** 5th International Symposium on Highway Capacity and Quality of Service, Yokohama, Japan, July 2006.
- **AITPM** National Conference, Melbourne, Australia, Aug 2006.
- Seventh International Congress on Advances in Civil Engineering (**ACE 2006**), Istanbul, Turkey, Oct 2006.
- **ARRB 22nd Conference**, Canberra, Nov 2006.



Papers were presented and the SIDRA INTERSECTION and TRIP software packages were demonstrated at these events (2-5).

Dr Rahmi Akcelik also conducted **Workshops on Traffic Signals** in Melbourne, Sydney and Brisbane during February 2006. These two-day workshops on the 2003 edition of the AUSTROADS Guide to Traffic Engineering Practice Series Part 7 (6) was organised by ARRB Transport Research Ltd and presented by Dr Akcelik assisted by local traffic signal practitioners. Over 70 delegates attended.

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

REFERENCES

1. AKCELIK & ASSOCIATES (2006). *SIDRA INTERSECTION User Guide*. Akcelik and Associates Pty Ltd, Melbourne, Australia. [Available under SIDRA INTERSECTION software licence only]
2. AKÇELIK, R. (2006). Speed-Flow and Bunching Models for Uninterrupted Flows. Transportation Research Board 5th International Symposium on Highway Capacity and Quality of Service, Yokohama, Japan. [www.akcelik.com.au/downloads.htm]
3. AKÇELIK, R. (2006). Analysis of Roundabout Metering Signals. AITPM National Conference, Melbourne, Australia.
4. AKÇELIK, R. (2006). Operating cost, fuel consumption and pollutant emission savings at a roundabout with metering signals. Seventh International Congress on Advances in Civil Engineering (ACE 2006), Istanbul, Turkey. [www.akcelik.com.au/downloads.htm]
5. AKÇELIK, R. (2006). Operating cost, fuel consumption and pollutant emission savings at a roundabout with metering signals. ARRB 22nd Conference, Canberra, Australia.
6. AUSTROADS (2003). *Traffic Signals*. Guide to Traffic Engineering Practice, Part 7. Association of Australian State Road and Transport Authorities, Sydney, Australia.