

Akcelik and Associates

Review of Activities During 2007

Introduction

This paper presents a summary of the research, development, training and other activities undertaken by Akcelik and Associates during 2007. These include:

- SIDRA INTERSECTION software development and user status,
- SIDRA TRIP software development and release,
- software training,
- research on roundabout metering signals, and other activities.

SIDRA INTERSECTION

The new generation SIDRA INTERSECTION Version 3 that runs under the latest Microsoft .NET framework version 2 in full Windows environment was first released in August 2006. Major update Versions 3.1 and 3.2 were released during December 2006 and August 2007.



SIDRA
INTERSECTION

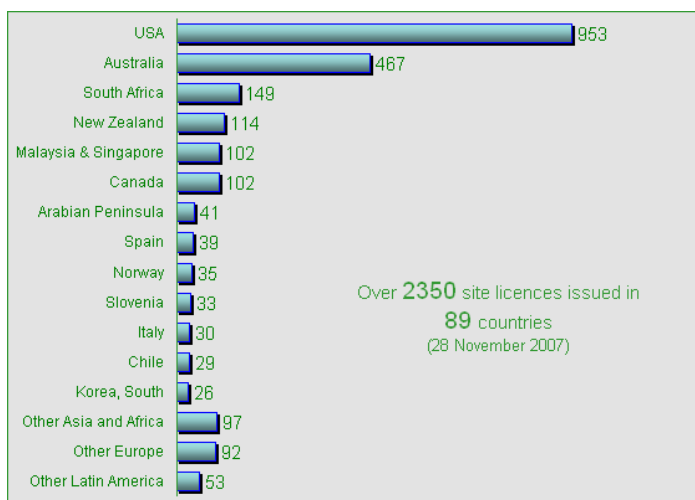
SIDRA INTERSECTION Version 3.2 incorporates new Input Report, Customised Model and Project Backup features, and significant enhancements to modelling, output, user interface, help system, and layout picture. It also resolves various problems found by users, and includes an updated User Guide.

Development work towards the release of SIDRA INTERSECTION Version 4 is in progress. This version will include enhancements to design life analysis, multiple and variable traffic signal sequence analysis, roundabout metering signals, and other traffic model features.

User Status

The use of the SIDRA INTERSECTION continued to increase at a high rate worldwide during 2007. It has now reached well over **2300 sites** in **89 countries**.

The number of licences in the **USA** is now **over 950**, representing the largest user group in the world, followed by **Australia and New Zealand** with over **580 sites**.



SIDRA TRIP

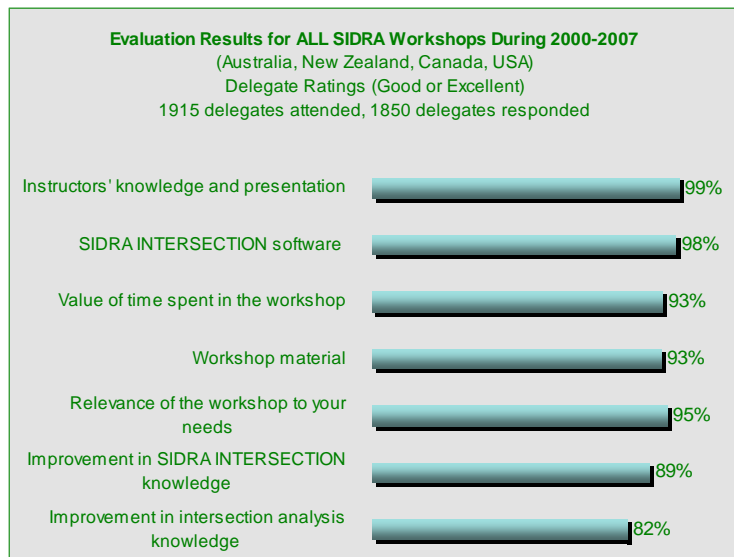
SIDRA TRIP is a new single-trip micro-simulation model for assessing travel level of service, performance (delay, speed, travel time), operating cost, user cost, vehicle fuel consumption, emissions and noise in real-life road networks.



The development of SIDRA TRIP was completed during the year after extensive beta testing. All aspects of the software have been improved significantly, including input, output, defaults and options, simulation and animation. The software now allows a wider variety of formats for importing GPS data, and provides a diagnostics facility for unreliable data points. A traffic noise model has been added with fixed and relative receptor points.

SIDRA TRIP launch date: 29 November 2007.

Software Training



During 2007, SIDRA INTERSECTION Beginner, Intermediate and Advanced training workshops were held in **Melbourne, Brisbane and Perth, Australia, Auckland and Takapuna, New Zealand, Baton Rouge, LA, Albany and Rochester, NY, USA, and Halifax, NS, Canada.** About **400 delegates** attended these workshops.

During 2000-2007, Akcelik and Associates and its accredited representatives ran over **100** training workshops with over **1900 delegates** attending. The trainees rate various aspects of the workshops and the SIDRA INTERSECTION software very highly.

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 research involved collection of extensive traffic data at five roundabout sites.

The research started in July 2006 and was completed early in 2007. Rahmi Akçelik will present a paper on this research project at the TRB National Roundabout Conference, Kansas City, MO (18-21 May 2008).



Other Activities

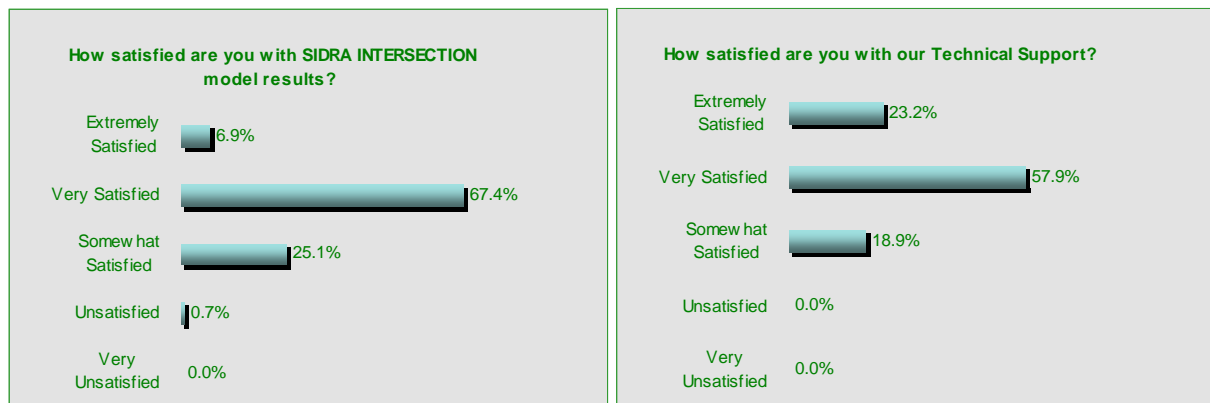
Microsimulation Forum

Rahmi Akcelik and Mark Besley attended the ARRB - AUSTRROADS Microsimulation Forum held in Melbourne (19-20 Sep 2007). Dr Akcelik's presentation at this Forum (Microsimulation and Analytical Models for Traffic Engineering) is available for download:

www.sidrasolutions.com/traffic_resources_downloads.htm.

User Survey

A user survey was conducted primarily for the purpose of determining user priorities towards SIDRA SOLUTIONS software development and assessing user satisfaction levels with the new generation SIDRA INTERSECTION Version 3. The results are pleasing since the user priorities are in line with our intentions of development work, and the users indicated high levels of satisfaction with SIDRA INTERSECTION Version 3.



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