ATOMIC

Automated fleet optimisation and routing

NICTA

At a Glance

The world of business is changing rapidly. Focus on controlling costs combined with industry regulations, concerns about energy use and emissions and occupational health and safety issues has led to the need for new tools to manage an organisation's operations.

In this dynamic world, ATOMIC delivers affordable, easy-to-use, flexible supply chain logistics software to help you make the most of your assets. Organisations such as freight, logistics and field force companies can now identify how to utilise their assets and resources in an optimal way.

We provide solutions to co-ordinate deliveries for freight companies; for phone companies to route their service vehicles dynamically; or for banks to move large quantities of cash around an ATM network.

The NICTA Approach

For the first time, ATOMIC demonstrates the power of freely combining problem solving techniques from the fields of artificial intelligence, operational research and metaheuristics. Our approach and software introduces a novel mechanism for mapping problem specifications to correct, efficient algorithms.

The Features

- ATOMIC recognises your operational needs are unique and demand a flexible, 'real world' solution
- ATOMIC is a comprehensive, automated scheduling and vehicle routing solution
- The ATOMIC solution is unique. It combines automated algorithms for vehicle routing with the flexibility of constraint programming to express common operational business rules.

The Benefits

- Existing alternatives either provide a single approach to solving many different problems, or require large amounts of expensive customisation. This puts best-of-breed optimisation techniques outside the reach of most organisations
- ATOMIC delivers affordable, easy-to-use, flexible and dynamic supply chain logistics software solutions
- ATOMIC will save valuable time, reducing capital deployed, personnel and vehicle resourcing and operational costs while also reducing emissions.

The Future

ATOMIC's first product release as a Vehicle Routing and Scheduling module within a cash logistics solution is imminent

- We will pursue direct, indirect (embedded) and Software as a Service (SAS) delivery options
- ATOMIC is now looking for customers and financial partners to scale to a stand-alone business

From imagination to impact

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NICTA

NICTA is Australia's Information and Communications Technology (ICT) Research Centre of Excellence and the largest organisation in Australia dedicated to ICT research. NICTA drives innovation through high-quality research, research training and technology transfer.

Our researchers are located in five laboratories located in four cities around Australia: Melbourne, Sydney, Canberra and Brisbane. Working in specialised teams, they are focused on a series of specific research themes and business areas.

Our work as a world-class research institute and Centre of Excellence in science and innovation brings together many of Australia's and the world's top ICT researchers. NICTA provides them with the facilities and support they require, making our vision a reality.

NICTA's unique approach fosters and develops ICT research. We work closely with both industry and other research institutions to solve problems and make breakthroughs in ICT with real impact.

NICTA's focus on use-inspired research means our projects have direct relevance to the challenges faced by business, government and individuals around the world. The result is breakthrough technologies that provide commercial opportunities and have a positive impact on Australia's export earnings.

Our Research Themes:

- ES Embedded Systems
- NS Networked Systems
- MSD Making Sense of Data
- MC Managing Complexity

Our Business Areas:

- Biomedical and Life Sciences
- Environmental Management
- Intelligent Transport Systems
- Mobile Systems and Services
- Safety and Security
- Software Infrastructure

For more information about ATOMIC

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Australian Government
Department of Broadband, Communications and the Digital Economy
Australian Research Council

NICTA Members
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UNSW The University of New South Wales
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