

On the road again

By **Scott Dowell**, Operations Manager, Transit Computer Systems

How routing and scheduling software helps the transport industry with new challenges.

How can we economically meet new challenges? The Australian transport industry changes on a daily basis, with contract moves, new legislation and customer demands providing difficult challenges to even the largest players.

Today is no different, with issues such as high fuel prices, driver shortages, council curfews, industry consolidation, customer demands, and community environmental concerns dominating transport headlines. Many transport managers are asking the question: “How can we manage these changes and maintain a healthy bottom line?”

One of the most common answers heard to this question is the cliché: “Work smarter, not harder.” It is no longer enough to run an effective transport operation - most manufacturers are demanding measurable efficiency gains from their transport providers. One of the ways transport managers are meeting this challenge is through the use of routing and scheduling software.

WHAT IS ROUTING AND SCHEDULING SOFTWARE?

A system that converts a list of customer orders into a set of delivery schedules. The orders are grouped into runs, in delivery sequence, and each run is allocated to a particular truck that can handle the orders - this is the routing process. Run sheets are printed for the drivers, which specify what time the driver leaves the depot, their arrival and departure time at each customer and their return time - this is the scheduling process.



KEY CONCERNS

HIGH FUEL PRICES

High fuel prices are a major concern to the transport industry, with representative bodies such as the VTA lobbying the government to take action. Routing and scheduling software can be used to reduce the number of kilometres travelled, by producing more efficient schedules. The strategic planning component of the system can be used to analyse the effectiveness of various strategies to minimise the impact of increased costs, such as changing fleet configuration or adjusting customer delivery days to smooth demand.

SHORTAGE OF QUALITY DRIVERS

Driver shortage and the lack of continuity of the casuals is a major issue for transport companies as retraining is a costly and time-consuming exercise. The use of routing and scheduling systems really helps as you give the drivers detailed run sheets and can say: "Here's a set of instructions that are easy to follow, go and do it."

COUNCIL CURFEWS

Local communities are becoming more concerned about the impact of large vehicles in their neighbourhood, with news programs such as A Current Affair running stories on the issue. One of the ways that councils are attempting to address these concerns is to impose tight curfews on the use of engine brakes. Recent legislation introduced in Europe to restrict large vehicle access to the CBD, may be adopted here, with Sydney the first city to discuss the idea.

One of the advantages of routing and scheduling systems over traditional manual scheduling is their ability to consider huge numbers of restrictions when producing

a schedule. As curfew requirements increase, it can become impossible for a manual scheduler to keep all of these rules in their head.

INDUSTRY CONSOLIDATION

Transport industry consolidation continues at pace, with manufacturers such as Arnott's and Nestle Dairy Products moving away from having their own transport network to using providers who offer a national solution. The impact of this consolidation can be felt at both ends of the market. Larger transport companies now have a more complex transport problem to solve, while smaller operators must adapt their businesses to be able to compete with the big boys.

CUSTOMER DEMANDS

The old adage that the better customer service you provide, the more your customers will demand, holds true for the transport industry. It is common for clients to push for tighter and tighter delivery windows, or faster response times. Without access to a routing and scheduling system it can be difficult for a transport manager to negotiate in this situation.

COMMUNITY ENVIRONMENTAL CONCERNS

Community awareness of environmental issues is increasing and there is talk amongst legislators of charging transport operators for their impact on the environment. It is becoming increasingly important for transport companies to be proactive in minimising their impact on the environment. By reducing the number of vehicles on the road and the kilometres that they travel, routing and scheduling software can be a vital first step in this process.

WHAT ARE THE BENEFITS OF ROUTING AND SCHEDULING SOFTWARE?

Routing and scheduling systems provide benefits in three areas: cost savings, management control and customer service.

Cost savings can be made on the road, by travelling fewer kilometres and using fewer resources; in the despatch office, by reducing scheduling time; and in

the warehouse, by allowing the pick to be organised by load and in delivery sequence. Typical cost savings when compared to manual scheduling range from 10 to 30 percent.

Transport managers get greater control through the power of "planned versus actual" figures, and key performance indicator (KPI) reporting.

“We don’t just sell the software and do the implementation, we build ongoing relationships with our clients. The first step to a successful implementation is to ensure that the estimated efficiency savings are realized in the first year. But maintaining those efficiencies year after year is just as important to the Transit team.”

-Nicola Williams, Managing Director, Transit Computer Systems

Customer service can be improved from reduced turn around times and tighter delivery windows. The monitoring of planned versus actual allows the transport manager to be proactive in alerting customers of expected delays.

DELIVERING PROMISED BENEFITS

The ability of a software package to deliver these benefits is often met with scepticism. This is hardly surprising given that some studies indicate a software implementation failure rate of up to 70 percent. One supplier whose clients are satisfied with the results is Transit Computer Systems, a Melbourne-based company, which has specialised in routing systems for more than 20 years. Their routing and scheduling system *Transit Odyssey* is used by a client list that includes the biggest names in the Australian transport industry: Toll; Linfox and Australia Post; and household names: Arnott's Biscuits; Tip Top and Tooheys.

Nicola Williams, Transit's Managing Director, attributes Transit's ability to succeed where others have failed to their focus on customer service. “We don’t just sell the software and do the implementation, we build ongoing relationships with our clients. The first step to a successful implementation is to ensure the estimated efficiency savings are realised in the first year. But maintaining those efficiencies year after year is just as important to the Transit team.”

APPLYING ROUTING AND SCHEDULING SYSTEMS

Routing and scheduling systems are used in three ways: on a day-to-day operational basis, for updating fixed runs and as a strategic planning tool.

The traditional user of a routing and scheduling system is a company that operates a next-day delivery service. In this situation orders can't be predicted accurately in advance, so the system's ability to produce a schedule quickly is vital. With *Transit Odyssey*, “you can change all the parameters in the world and Transit will come up with a way of getting it delivered. That's one of the beauties of it.”

In a fixed run situation, the requirement to call on a customer is known in advance. An example of this would be a client's delivery of bread to the same outlets every day. A review that “would have taken two weeks can now be completed in two days.”

An example of the use of routing and scheduling software as a strategic planning tool, would be a “what-if” scenario such as “What if we negotiated new delivery windows with our customers”, or estimating costs for a tender response. Another client recently used Transit's consulting services to explore supply chain strategies and said of the exercise: “Every specific question that we asked for came back with a pretty clear answer about what the costs were for each of those options.”

MEETING THE NEW CHALLENGES

With an understanding of what a routing and scheduling system is, we can return to the question posed by transport managers: “How can we manage these industry changes and maintain a healthy bottom line?”

Routing and scheduling systems such as *Transit Odyssey* can help the transport industry to meet today's challenges, but it is unlikely that the pace of change will slow. A routing and scheduling system is not a crystal ball, or a magic bullet, but its' value in coping with current and future changes cannot be underestimated. ■