

STEPHANIE SWANEPOEL anticipates South Africa's ambitious new Open Road Tolling system

In keeping with world trends and values regarding sustainable transport, the South African government has started to shift emphasis in its transportation policy, public spending and actions away from building and supply to management and demand.

This is in convergence with growing concerns about reducing the use of non-renewable resources and increasing respect for the environment.

In accordance with this new paradigm, the Gauteng Freeway Improvement Project seeks to upgrade more than 500km of highway within the province of Gauteng, with phase one consisting of the upgrade of 185km of road network. Central to this first phase will be the implementation of the Open Road Tolling system by the South African National Roads Agency Ltd (SANRAL).

The Tolcon Group, a provider of comprehensive management and operational services enjoys a strong relationship with SANRAL and will be playing a vitally important role in all aspects of this project, as a service provider to the ETC Joint Venture between Kapsch TrafficCom and Traffic Management Technologies (TMT). The company has already become an integral part of various road projects throughout South Africa in partnership with SANRAL, covering most of the major toll routes in the country. Many of these projects have contributed significantly to transportation

infrastructure improvements, job creation and economic development in the country.

Back on the move

The new ORT system will improve on the much needed capacity and throughput. Currently, the province's peak traffic hours see average speeds of a mere 20km/h and as the busiest freeways in the southern hemisphere, the road network has to sustain 1.4m people utilising it on a daily basis.

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In South Africa and in particular the Gauteng province, the construction of new roads as a mechanism to meet constantly rising traffic demands is not spatially plausible, hence technological and current network improvements are the obvious solution to the severe congestion within the province. The significant improvement of the province's roads will be brought about by the construction of additional lanes to existing freeways, interchange improvements, a freeway management system which includes intelligent transport systems and the integration of the improved network with public transport.

Construction will be briefly suspended during May 2010 due to the World Cup football tournament, and although plans for the Gauteng Freeway Improvement Project were laid out before South Africa won the bid for the tournament, part of the intensive building of highways is to ensure a better working city for international football fans. Upon completion of the project in Gauteng, it is believed that the next major metropolitan area to receive electronic tolling will be Cape Town, a major tourist destination in the country.

Transport infrastructure changes in the province also include the much anticipated Gautrain - an 80km project

serving 10 stations with a frequency of operation at every 10 to 20 minutes. Duties of the Bombela Operating Company (BOC) will include security services linked via radio to a security control centre which will be manned 24 hours a day, seven days a week and will monitor the overall system by means of CCTV cameras and intrusion detection systems. The automatic fare collection system (AFC) will make use of contactless reusable cards which can be purchased from station kiosks and vending machines.

A story previously tolled

Tolling is a far from new concept in South Africa. Although road users in the province will soon experience the technological advances in tolling, not all users will have to be initiated. The first toll concessionaire in South Africa to offer motorists the option of using electronic tags was Bakwena Platinum Corridor Concessionaire (Pty) Ltd. The Platinum Toll Highway consists of a 95km section of the N1 running from Pretoria northwards to the town of Bela Bela (Warmbaths) and a 290km section of the N4 running from Pretoria westwards to the Botswana border.

Bakwena was awarded the contract to design, build, finance, operate and maintain the Platinum Toll Highway in late 2000. In March 2002, the option of Electronic Toll Collection was introduced to users. Current usage of ETC is at nearly 15 per cent of all transit through Bakwena's plazas. At all plazas around Pretoria, as many as one in five users - or over 500,000 transits per month - use ETC as their preferred method of payment. This combination of Electronic Toll Collection and conventional manual tolling effectively enables toll fees to be collected at minimum cost and with minimal disruption to traffic.

The tolling operations and routine road maintenance on the Bakwena N1N4 Toll Highway are undertaken by a special purpose company, Pt Operational Services (Pty) Ltd, operating independently and contracting to Bakwena. Pt Operational Services is jointly owned by Tolcon and 2 major international tolling companies, Dragados and Albertis.

A clear road ahead

Traffic and Incident Management is of top priority to the National Roads Agency, and in 1991 the National Department of Transport initiated Incident Management on a number of national routes in South Africa.

In accordance with government legislation regarding the implementation of Incident Management Systems (IMS) on all national roads, Tolcon has been involved in the development, implementation and maintenance of 10 Incident Management Systems in various parts of the country since 1997.

Currently four different systems are being managed by Tolcon and cover a total of 1200km. In these areas it has been found that having an incident management system in place results in a reduction in incident duration. This leads to improved safety and reduced delays at incident scenes, which in turn translates into a reduction in road user costs and a reduction in economic costs to the economy of the country.

Before an effective incident management system can be implemented, there must be an in-depth assessment, guidelines must be established, policies and procedures must be developed and communication channels must be established with all stakeholders.

The implementation phase includes training of all of personnel, organisations and services that respond to incidents. The system is further enhanced through ongoing training, revision of procedures, debriefing following incidents and dynamic feedback into the system. ■

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The Tolcon Group is a leading provider of transport infrastructure management services in South Africa. The group consists of a cluster of companies within the Murray & Roberts Group. Tolcon has been operating in South Africa since 1985.

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