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Courtesy Questek Transit Technologies

Improved public transport in Johannesburg

The whole world was watching South Africa for the final round of the 19th FIFA World Cup 2010 that was held from 11 June to 11 July 2010. In order to move the many football fans quickly, safely and comfortably to the stadiums, the City of Johannesburg launched a public urban transport project called 'Rea Vaya'. This transport system comprises the construction of a completely new bus network, which also includes rapid transport services. The fleet of vehicles are deployed and controlled on the basis of a cutting-edge computerised Automatic Vehicle Location and Control system, supplied by Trapeze ITS Switzerland GmbH.

The Province of Gauteng surrounds South Africa's biggest city, Johannesburg. Though it is the smallest of South Africa's nine provinces in terms of surface area, it has the largest population density and the highest gross domestic product. Gauteng was one of the core venues for the FIFA World Cup 2010, boasting three stadiums (one in Pretoria and two in Johannesburg). This was the biggest sports event that has ever been organised on the African continent. South Africa was proud of hosting 'its' World Cup and has invested considerable sums in its infrastructure such as new stadiums, hotels and airport expansions as well as public urban transport networks.

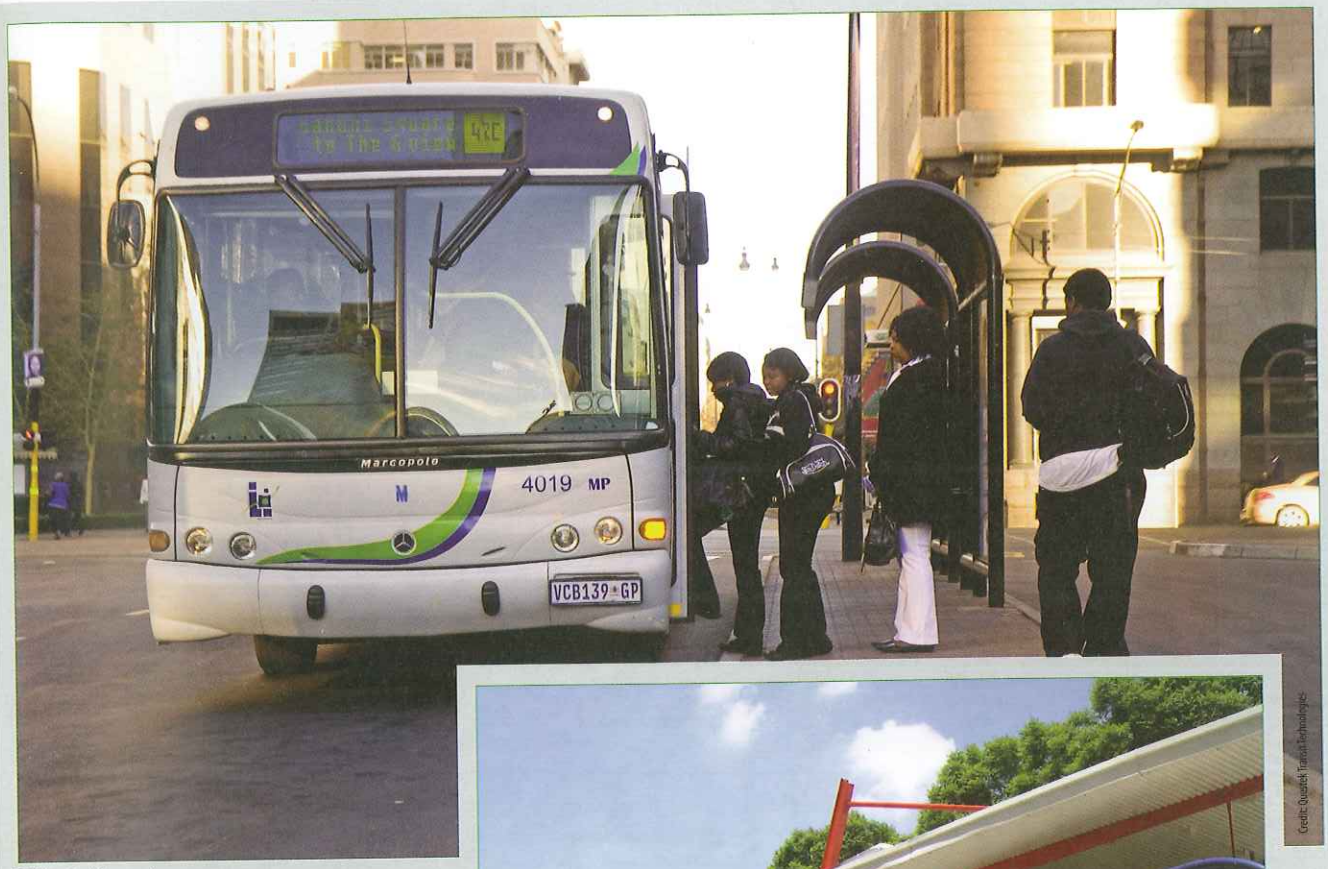
In Johannesburg, the Rea Vaya project was launched in early 2009 (Rea Vaya! means 'We Are Moving'). The goal of this promising project is to build the most extensive Bus Rapid Transit (BRT) system on the African continent. It is based on a computerised Automatic Vehicle Location and Control (AVLC) system supplied by Trapeze ITS Switzerland GmbH.

According to the Department of Transport of Gauteng, the new BRT system is indispensable for ensuring reliable public transport services in the surroundings of Johannesburg. The government of the province plans to create a link between the basic road and rail transport networks and other nodes. This is to be accomplished by means of an integrated transport system including road, rail, air and goods traffic plus logistics. The BRT system integrated in this plan is based on Latin American models, where a lot of experience has been gathered to date under similar conditions. It is thus one of approximately 40 BRT systems across the world – 80 others are in the planning stage, including London and New York.

Focus on service and safety

The backbone of the BRT system is formed by special bus lanes in the centre of the streets and roads on which long-range buses capable of carrying 100 passengers travel. As buses always have priority, the BRT system offers a similar level of efficiency as railways – but at appreciably lower capital investment costs. Besides the BRT routes, the system also includes feeder routes with smaller vehicles (70 passengers) as well as special bus routes through the centre of Johannesburg. These are designed to reduce private traffic and to upgrade the quality of living in the city.

In April 2009, the Johannesburg Roads Agency entrusted Questek Transit Technologies, South Africa, and Trapeze ITS with supplying and installing an Advanced Public Transport Management system for this Bus Rapid Transit network. This computerised AVLC system, the first that was applied in South Africa, focuses on driver dispatch, passenger information and fleet management. Thanks to improved dispatch possibilities, this further



BRT bus in Johannesburg

BRT bus stop

Credit: Institute for Transportation and Development Policy ITDP / Aimee Gauthier

of the Province of Gauteng live in urban areas. But public transport services are meagre and their quality is on a steady decline. To date, public urban transport services were operated by many uncoordinated authorities and companies, including numerous private minibus-taxi businesses, some public bus companies and an underground railway. In 2011, an intercity traffic service is scheduled to start operation – the so-called 'Gautrain'. However, many road and rail vehicles are obsolete, and no additional capital is being spent. This spells overfilled transport vehicles, which offer a poor level of service and hardly any security.

It is assumed that in Gauteng, 85% of all commuters who travel by public urban transport use vehicles of several transport companies on each trip that they make. Because of missed transfers, incoherent timetables and different information systems, serious delays are frequent. Moreover, transport agencies all have their own ticketing systems, raising the cost for commuters. Today, as many as 70% of all commuters in South Africa – which translates into more than 29 million people – spend up to 40% of their household income on transport services. The internationally accepted standard is a maximum 5%.

In order to avoid undesirable competition, the taxi and bus operators have a share in the new transport system in the form of franchises and are paid based on kilometres travelled.

After the World Cup, the project goes on. By 2013, a route extension to 122km is planned, with a daily capacity of 430,000 passengers. In addition, Cape Town, Pretoria, Durban and Bloemfontein are to be integrated in the system. This will lay the foundations for a sustainable transformation process which will change the image of public urban transport throughout the larger region. In the long-term, the system will greatly upgrade the region – on the one hand by promoting economic development, on the other hand by improving the quality of the air and the environment.

Reference

1. *www.reavaya.org.za*

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Hans Blankestijn has worked for Trapeze ITS since May 2008 as International Business Development Manager. Previously, he acted as International Sales Manager at ACIS UK and as Senior Infrastructure Consultant at Cap Gemini Ernst & Young. In 1999, he founded the company Qmagic Network Professionals.