

URBAN TRAFFIC CONTROL FOR CITY OF TSHWANE

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ABSTRACT

The City of Tshwane implemented an Urban Traffic Control (UTC) system as part of the Bus Rapid Transit (BRT) system, appropriately named A Re Yeng. The first phases of the BRT route extend through the Tshwane CBD up to Hatfield. The City currently has 800 traffic signals, of which approximately 200 are located in the CBD and around Hatfield, thus forming part of the BRT route infrastructure.

The implementation of the UTC system comprised of the following main elements:

- The upgrading of 200 traffic signals, including a new control centre with adaptive traffic signal control as well as traffic signal priority for BRT trunk route buses. It is the first application in South Africa of the SICE adaptive traffic signal algorithm.
- A communication system that consisted of using existing fibre optic lines belonging to three different departments, new fibre optic as well as a wireless communication network.
- Twenty Variable Message Signs to advise motorists of traffic incidents.
- Twenty Parking Guidance Signs indicating available parking bays in parking garages.

This unique project placed Tshwane in the position of being the first Metropolitan Municipality in SA to implement parking guidance, Variable Message Signs on arterial roads, as well as traffic signal priority for their buses on the trunk lines

The paper describes the multi-disciplinary challenges that were faced in the design and implementation of the project. Another challenge was the management of construction – the contractor had up to 20 different teams working on traffic signals, Variable Message Signs, parking guidance or communications systems.