Gauteng Freeway Improvement Project and Open Road Tolling

Alex van Niekerk
SANRAL
March 2013
Introduction – Tolling & Standards in South Africa

- First (modern) toll plazas – mid eighties
- Tolls mostly non-urban
- However, with introduction of urban tolling – need to implement best practice
- In 2000, SANRAL went through a process to determine international best practice w.r.t. electronic toll technology.
- Objective – to achieve a single standard and promote interoperability throughout South Africa
Platinum Toll Road – First ETC Rollout

- 2001 – Platinum Toll Concession awarded
- Included urban tolling
- Required ETC standard – selected to be national standard
- 5.8 GHz CEN 278 adopted
PLANNED LANE ADDITIONS: 201 km (2012)

FUTURE UPGRADES: (223 KM)

PLANNED NEW ROUTES: 158 km

- 1 000 000 daily users
- 2 500 000 daily transactions
- Road sections with between 100 000 to 200 000 vehicles per day

Open Road Tolling required!
Basic Concept for ORT

- Doing a toll transaction that requires:
  - Identification of the vehicle
  - Classification of the vehicle in terms of vehicle size

  all electronically without requiring the vehicle to slow down or stop.
Reads the e-tag

Photographs the front of the vehicle

Classifies the vehicle by volume

Photographs the back of the vehicle

Verifies that all details are in accordance with registered e-toll Account

Toll fees are paid without stopping or slowing down
Tolling Advantages

- Creates the ability to raise funds to construct, maintain, operate and expand a road.

- In urban environment, it also has travel demand management objective:
  - Reduces the number of overall trips
  - Incentive for sharing trips
  - Reduces urban sprawl
  - Incentivise the use of public transport
  - Incentivise travelling outside peak hours by means of time of day discounts
Gauteng Freeway Improvement Project (GFIP)
Background

- Gauteng Province – 38 % of GDP
- Various economic studies indicated negative effect of congestion on Gauteng economy and standard of living
- Required an intervention – funding constraint
- Proposed in 2005 the GFIP to Minister of Transport
- Several approval processes including toll declaration process were followed in 2006/7
- Toll declaration concluded in March 2008
- Thereafter, project procurement was concluded and construction commenced
First phase of GFIP nearing completion

Comprised:
- 201 km upgraded
- 585 additional lane km’s
- Estimated 2100 lane km’s of final surfacing (asphalt/UTFC)
- 34 interchanges were significantly upgraded
- 4 new directional ramps (fly - overs)
- ITS deployment

GFIP has over 1 million users per day – use will continue to grow

Was implemented through predominantly the issuing of SANRAL bonds
Open Road Tolling
Open Road Tolling (ORT) principles: Making payment of toll easy

- **National Central Transaction Clearing** – key principle for the implementation of ORT
- Achieve **single account** with multiple account units – central clearing of all transactions country wide where electronic tolling is/will become available
- SANRAL is the custodian of the **Transaction Clearing House (TCH)** – provides this service to concessionaires (Bakwena)
Open Road Tolling (ORT) principles: Making payment of toll easy

- e-toll tags works already at Bakwena toll plazas
- As and when traffic demands, existing SANRAL toll plazas will be fitted with Electronic Toll Collection readers to allow same e-tag to be used at these plazas – less congestion and requirement for additional toll lanes – in implementation process
Central Operations Centre

- **National facility**
- **Open Road Tolling (ORT)**
  - Road side information from gantries
  - ORT back office services
    - Manual processes if automated process needs to be clarified
- **Transaction Clearing House (TCH)**
  - e-toll Account Management
  - e-toll Call Centre
- **Violation Processing Centre (VPC)**
  - Management of violations and outstanding toll
Identification Options

- Register to be identified by your Vehicle License Number (VLN)
  - Only qualify for time of day discounts
- Register to be identified by an e-tag together with the VLN
  - E-tag is linked to a specific vehicle
  - Qualify for additional discounts
Distribution of e-tags

- **Retailers**
  - Checkers,
  - Pick & Pay, and
  - Shoprite

- **At e-toll Customer Service Outlets**

- **Order** an e-tag on-line or through the e-toll Call Centre (delivery/collection options)

- **Existing Bakwena e-tag** holders must also register – however, they do not require new tag
Why/how promoting fitment of e-tag

- **Why:**
  - Cannot be cloned, linked to Vehicle Licence Plate Number, so cloned number plates will be identified
  - Transaction cheaper, less manual processes

- **Access to discounts**
  - 48% e-tag discount
  - R550 ($75 US) monthly cap for light vehicles fitted with e-tag
  - Frequent User Discount
Enabling Easy Registration

- **Web** ([www.sanral.co.za](http://www.sanral.co.za))
  - User friendly design to register vehicle/s and select a payment method
- Through contacting the **e-toll Call Centre** [0800 SANRAL (726 725)]
- Through various conveniently located **e-toll Customer Service Outlets**
- Obtain a registration form and **fax** the completed form to 0800 SANRAL (726 725) or **e-mail** to [info@sa-etoll.co.za](mailto:info@sa-etoll.co.za)
e-toll Customer Service Outlets for the Initial Registration Phase
e-toll Customer Service Outlets
Permanent
e-toll Customer Service Outlets
Customer Centres near Interchanges

- ITS and IMS
e-toll Customer Service Outlets
Mobile Outlets

- Mobile enforcement post toll commencement
  (on road; at on ramps)
Providing Various Payment Methods

- **Prepaid Account:**
  - Transactions for the day are deducted directly from Prepaid Account, on condition that there is a positive balance
  - **Top-ups can be done:**
    - Manually
      - At retailers
      - e-toll Customer Service Outlets
      - Electronic Funds Transfer (EFT)
      - In future at ATMs
    - Automatic
      - By linking a Credit Card or Debit Order, that will top-up the e-toll Account, once the low balance has been reached
Credit Card Settlement Account:

- Directly linked to your credit card – Master or Visa (only post paid option)
- Transactions for the day are rolled up, and settled from nominated credit card
Toll Challenges

- Tolling implementation in urban environment affects commuters – public opposition
- Affordability – big issue
- Developed options to lessen financial impact on commuters:
  - Exemption of qualifying public transport vehicles
  - Monthly toll caps
  - Frequent user discounts
Toll Challenges

- Developed options to lessen financial impact on commercial users (trucks):
  - Extensive time of day discounts
  - Monthly toll caps
- Need good vehicle data from national vehicle data base
- Must have proper enforcement strategies in place
- Must have enabling legislation in place
Thank You