Traveler

a road safety ITS technology

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Overview

- Perspective: Road insecurity and smart mobile (3G) penetration
- Traveler
  - Functionality: practical aspects
  - Technology: GPS and sensor system
- Benefits
  - RTI for prevention and response
  - Provides travel behaviour data
  - Enforcement toll
- Other potentials
Perspective: Road insecurity and opportunities for smart mobile (Android) technologies

- Developing countries like Cameroon account for 90% of road accidents
  - Mostly young people below 30 years old.
  - Speeding remains the principal cause

- Rapid increase in the use of 3G mobile in affected countries
  - Most young people and transport actors possess smart handsets.
    - Android OS makes over 90% of smart mobile in Cameroon
  - Internet mobile increasingly cheaper
TraVeler

- Smart mobile road safety application
  - Android version available on Google Play
  - Apple version under construction
  - Minimal hardware requirements
    - Install in low budget smart phones
TraVeler

Startup Developers

- Young Cameroonian engineers

http://traveler.cm/

Key Features

- Journey register
- Speed counter
- Travel tracker
- Collision/impact detector
- Automatic sms alert
- First aid guide
TraVeler

- How it works
  - Install application and create an account
    - User name ______
    - Email address ______
    - Phone number ______

- Easy journey register
  - Select/Enter
    - Transport mode
    - Origin - destination
    - Vehicle registration
    - Emergencies contact telephone numbers
Accident prevention

Speed management

- Alerts users onboard an over speeding vehicle
- Behavioural change effect on drivers

- Speed enforcement: Real time information transfer to authorities
- Black spot identification: GPS vs accident data
Post-crash response

Impact detection

- GPS and sensor technology
  - Ultra fast/sensitive impact analyser (airbag reflex)
  - Can distinguish between severity of impact (injury)
- Correction factor for false alarm (eg phone dropping)
**Traveller**

**Post-crash response**

**Automatic emergency alert**

- Nearby medical facilities / hospitals
- Road safety authorities
- Emergency contacts
- Preferred medical facility (purported severity of injury)

**User triggered emergency alert**

- By initiating an “accident” report in the system
First aid tips (manage incident)

- 10 steps drill on first aid
- How to move or transport a victim
Applications in the Ministry of Transport
Integration with other onboard GPS systems
  • Immobilise or reduce vehicle speed from control centre
  • Reinforce existing GPS devices

Removal of obstacles on the highway
  • Road users can alert MINT of obstacles using the system message service
  • MINT automatically determines the location of the obstacle and deploys the appropriate tow truck
Future potentials

Justice implementation
- Transporters can be mandated to equip & connect their fleet
- Records can serve as evidence in criminal investigation procedure

Traffic management
- To determine optimal speed of road sections
- To develop a travel diary (data collection opportunities)
future potential

• Promote public transportation
  ◦ To provide security for public transport users
    • Verification of driver and/or vehicle information
  ◦ Bus tracking
    • Urban bus information system can be incorporated

• Road safety
  ◦ Driver fatigue
    • As a log book for commercial drivers
  ◦ Accident analysis
  ◦ Research
Thank you