LIGHT SOURCE SOLUTIONS

Distributor
GE Lighting

Current
powered by GE

Daintree
ENTERPRISE

TUNGSRAM

Telematics
Wireless

About Telematics Wireless

- 1996 - Established – spin off from Tadiran Communications and Systems Group. Military to civilian applications
- 2008 - Acquired by STEE InfoComm (Singapore Technologies)

"Telematics have gone the extra mile to make sure our streetlight conversion is top notch"

Commissioner, Cleveland Public Power

"One gateway for tens of thousands of lights is why we chose Telematics Wireless Galaxy"

Georgia Power

Our wireless Smart City Solutions

Over 1 million location devices delivered

Over 500,000 RFID transponders delivered

Over 13 million radio modules delivered (10,000,000+ in US)

Over 250,000 street lighting nodes deployed in UK, New Zealand, Canada, USA, Sweden and others

Terrestrial RF Location

- Stolen vehicle recovery
- Asset & cargo tracking
- Personal location
- Fleet management

RF Identification (RFID)/AVI

- Electronic Toll Collection (ETC)
- Commercial vehicle operations (CVO)

Automatic Meter Reading/ Advanced Metering Infrastructure (AMR/AMI)

- Water, Gas
- Electric power/Smart Grid

Smart City Networks

- Street Light Control
- Water Resource Management
- Sensors

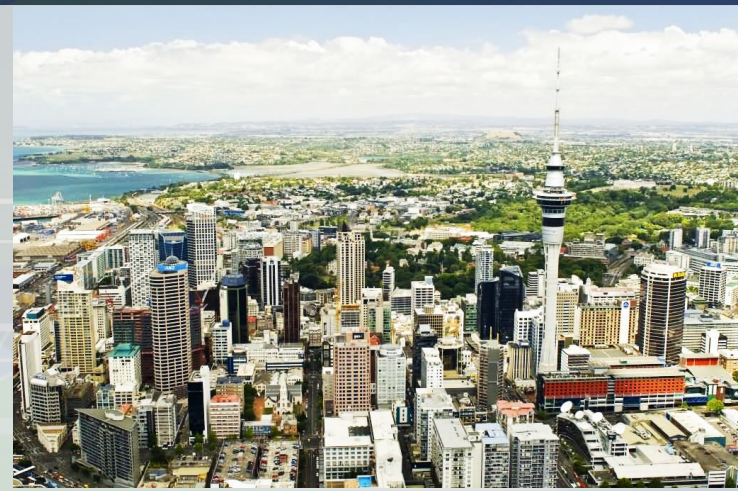
Our approach to Street Light Control

- Telematics offers various network technologies:
  - i) **T-Light Galaxy (Licensed RF Star network)**
  - ii) **T-Light PRO (Unlicensed RF mesh network)**
  - iii) **T-Light LoRa**
  - iv) **T-Light LCU-C (Cellular)**
- Solution provider- not ‘one’ technology supplier
- Every technology has its limitations – work through them

Deployment example: Auckland, New Zealand

60,000 luminaires and growing

- Dense Urban Area and suburbs
- Chosen technology - **T-Light Galaxy (Star)**
- Up to 50,000 LCUs (Light Control Units) per base station
- Licensed frequency in 450-470MHz band – no interference!
- Distance coverage – radius of ~20km
- Other ‘smart city’ deployments leveraging off street light control system



GALAXY Base station

LCU-C in Auckland

Deployment example: Kent County, UK

120,000 luminaires

- Wide coverage area: cities, towns, villages; variable density
- Chosen technology - **T-Light Pro (Mesh)**
- Multi-hop, self-healing, scalable network
- Non Line-of-Sight secure links
- Single gateway supports up 1,000 LCUs
- Unlicensed 869MHz (Europe), 915-928 MHz band (Australia)

Additional current and planned deployments

Montreal, Canada

Southend-on-Sea, UK

Tauranga, New Zealand

Gothenburg, Sweden

Georgia Power Company, GA, USA

Cleveland, OH, USA

Lessons learnt / Outcomes

- “Twin revolution” – LEDs and CMS (Control & Monitoring Systems)
- LEDs providing ~50% , CMS - further 15-20% energy savings
- Improved maintenance - reduced downtime - better service to the public
- **Metering** (regulatory changes to be completed)
- **Street Light Control – clear/tangible financial payback and business case**
- Implementation delays due to bundling with other ‘smart city’ initiatives

Lessons learnt / Outcomes

- Consider different networks for various smart city deployments
- Interoperability - network level through TALQ2.0 interface- feeding into one CMS.
- Waiting for the ‘perfect’ technology to emerge!
- The Ownership model in Australia = delays
- Opportunity now to deploy CMS along with LED upgrades

Thank You…

Street Light Control network – a platform for Smart City applications

Luminaires with power supply and built-in radio-networked device enable wireless network reach everywhere in the city