

# Redundance Axle Counter Evaluator Application for MTM

Metro Trains Melbourne selects Thales Axle Counters

MTM awarded Thales with the delivery, training and engineering support for the deployment of the AzLM Version 6.3 Axle Counter to support significant re-signalling project in Melbourne. The contract award is the result of more than 18 months close cooperation between MTM and Thales. The story began middle of 2012 when Thales

The key technical point for MTM to select Thales were

- **Rail contact mounting over the sleeper**  
*Installation of the rail contact over the sleeper will ease maintenance activities as the rail contacts do not need to be dismantled from the rail during tamping and grinding activities.*



Trial site with 2 technics in parallel

was approached by MTM about general information for the Axle Counter product. At this time, Thales had just received the Type Approval Certificate from Aurizon in Queensland. As the interest grew rapidly, a workshop was set-up at Thales premises in Melbourne with live equipment demonstration with rail contacts mounted to real rails. Many attendees tried to provoke an influence by placing a coin or their personal key rings on the rail but could not manage to disturb the system unlike issues they have faced with similar gear before.

MTM and Thales kept in touch constantly, which culminated in a type approval by cross acceptance of the AzLM Axle Counter after a successful trial on site. During the trial period there were no disturbance on the system. Trial results derived from remote diagnostic systems demonstrated that at least 140 trains that run through the section reliably everyday.

- **Redundancy**  
*Additional flexibility and availability by using redundant indoor and lineside equipments*
- **Ethernet connection of detection points**  
*The use of IP networks to connect detection points allows for a centralised architecture that is independent of distance from the field equipment. MTM is also leveraging their existing fibre optic networks to provide the backhaul connectivity.*
- **Remote Maintenance**  
*The use of remote maintenance allows the MTM fault centre to monitor the performance of the Axle Counter System and respond proactively failure scenarios to ensure any failure has minimal impact to rail services.*
- **Wheel detect rail contacts**  
*The robust and less sensitive rail contacts provide better vandal proof solution without impacting on integrity of the detection system.*

## About MTM



MTM is a joint venture company – consisting of MTR, United Group Rail & John Holland Rail

*Patronage growth  
(7.9 % year on year since 2004,  
forecast to continue)*

*In the busiest hour MTM runs  
21 trains through the centre of  
the city of Melbourne*

*MTM have a fleet size of  
197 x 6 car trains*

**MTM's network consists of**

- 850 km of trackside infrastructure
- An underground rail loop of 20 km
- 220 Stations
- 174 Level Crossings



Train approaching Axle Counter trial in Melbourne