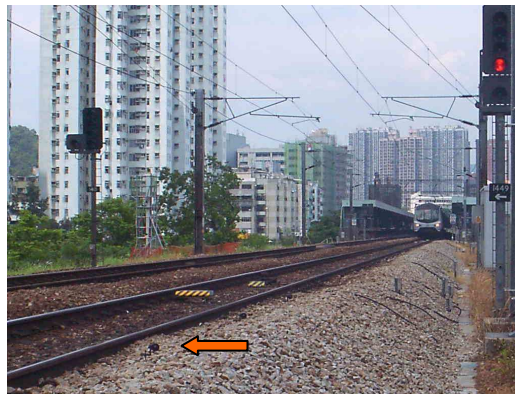


KCRC EAST RAIL EXTENSION, TAI WAI MAINTENANCE

TAI WAI - CHINA

Monitoring Tracks sides and Over-Head line masts of a live railway during the extension of the KCRC East Rail.

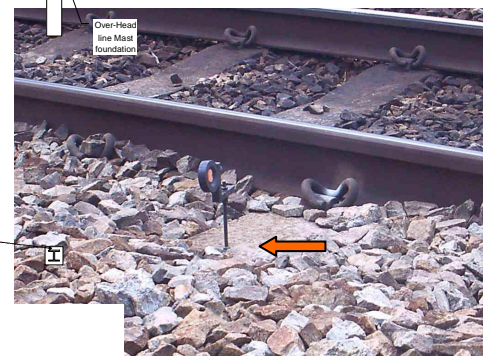
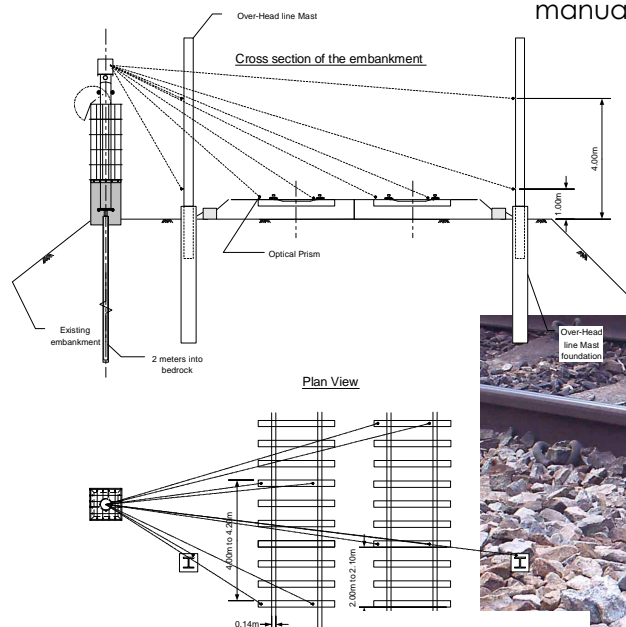
SolData proposed an accurate method for measuring track settlement and differential cant to the railway, using an automatic on-line deformation monitoring system (CYCLOPS). This system has been used and approved by KCRC (Kowloon Canton Railway Corporation) and MTRC (Mass Transit Railway Corporation) for the monitoring of the MTRC Airport Express Line during the construction of the KCRC West Rail.



A management system will automatically control the CYCLOPS to measure prisms on the track sleepers and the over-head line masts, and calculate the movement in three axes (X, Y, Z), as well as to calculate the tilt of the track and overhead line masts. This system minimises the use of track possession and night surveying, and the time delay factors associated with a manual surveying method

The system provides the following advantages:

- Continuous: Measurements can be made continuously including on live railway.
- Remote: No possession of tracks is required for the regular monitoring activities.
- On line graphical visualisation of the latest measurements and of the historical time graphs presented on a user friendly screen,
- Accuracy far superior than manual monitoring in the dark, and well within specifications.



The monitoring zone is divided in 5 sections of 160 m. In each section an Automated Total Station is mounted between 4 m to 6 m from the nearest track depending on site conditions. Each of the observation masts are approximately 4 m above the track level. This has enabled to measure the tracks more accurately and safely, and at more regular intervals (approx. 4-hour cycle).

OWNER :	MTRC
CONTRACTOR :	GAMMON
DATE OF WORKS :	2001-2003
WORKS DONE :	
	<ul style="list-style-type: none"> • Installation of 7 CYCLOPS, • 1700 monitoring prisms • 5000 calculations/hour • Automatic data management and reporting twice a day