

T&T™ ... Faster & heavier trains

Save fuel, reduce track wear & no loud track squeal

Worldwide, there is a strong return to rail operations, in freight, bulk commodities and people movement. The existing permanent way infrastructure is being pushed to get extra performance out of the asset, while meeting more demanding safety standards and achieving increased environmental gains.

And in a number of systems, train operators and track owners have now been separated. Both have a different range of objectives, both can be assisted with the hardware and software package, **T&T™**.

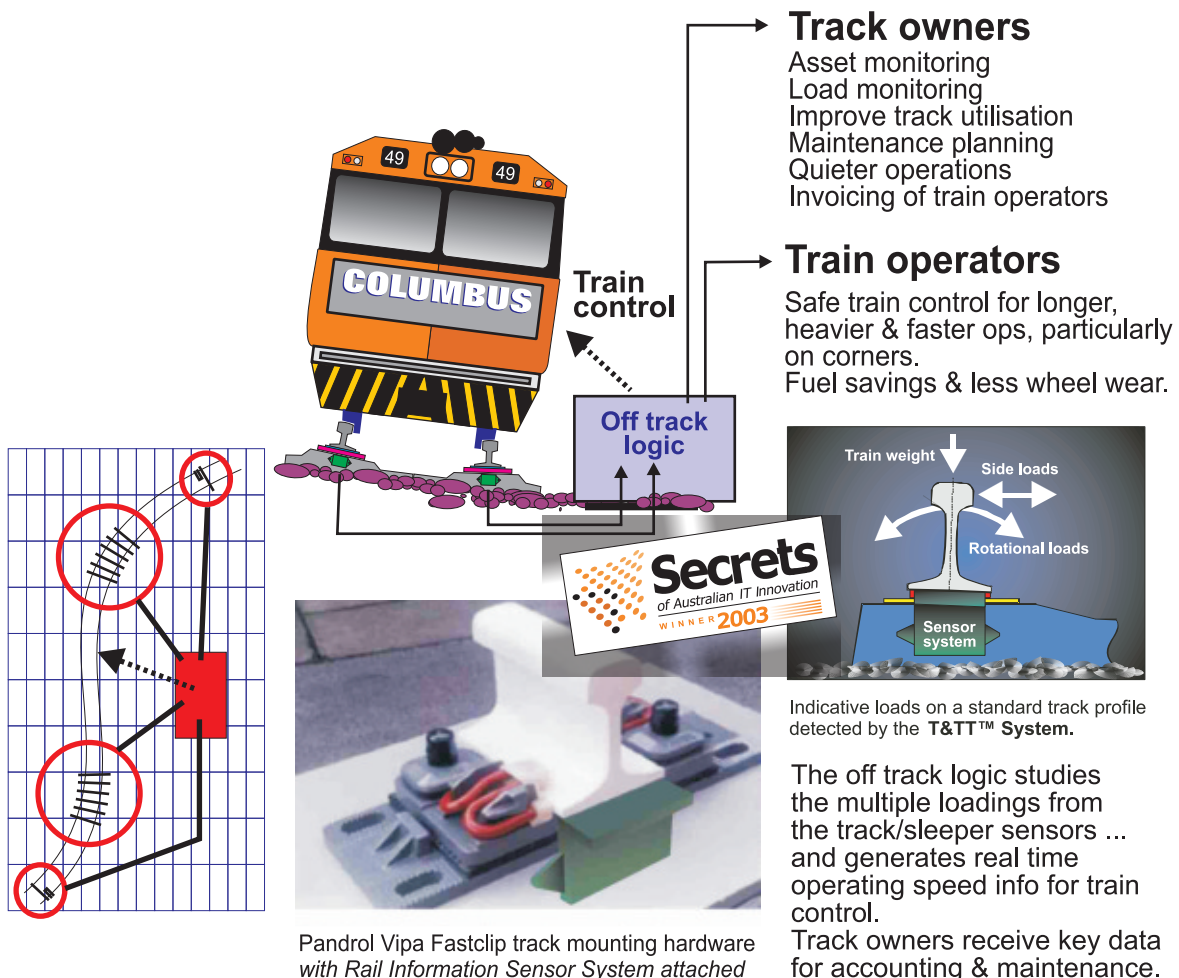
What is T&T™ ?

The three major parts are

- (1) Large numbers of low cost sensors attached to the rail infrastructure,
- (2) the IT Award Winning Innovation software analysis platform, and
- (3) on train control installations.

The core of the analysis engine is

- (a) the distribution of the data crunching function,
- (b) a multi-facet, 'smart' way of looking at the same data and
- (c) innovative ways of getting immediate and practical outcomes back to the train operators and track owners.



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T&TT™ System Package

1. Track/sleeper sensors with radios
2. Near track ruggedised PC's
3. Smart real time train control logic
4. In loco speed display
5. In loco, automated speed control
6. Remote accounting & maintenance management reports

Specifications
subject to change
with product improvement
T&TT-2004-Jan-0011

The start point The take up of **T&TT™** starts with the practical review of existing layouts of track owners, highlighting permanent way issues like:

- (a) operational bottlenecks due to speed limitations,
- (b) corners with excessive wear problems,
- (c) sections of tracks where the wheel/rail interaction causes excessive squeal noises and community back lash, and
- (d) demands by train operators seeking faster operations.

This detail is often already available from track owners, together with the current ways that the issues are being addressed and the cost reduction targets of both the track owners and train operators.

The outcome is a **Scope of Works T&TT™ Program** with recommendations for trial installations and automated management and accounting procedures, through to total network benefits and train operator technology uptake in the cab of engines.

Background

The COLUMBUS Group has been involved with multiple light rail and heavy rail operation optimisation projects since 1982. Example: compared to the Renault VEG CIVIS light rail technology, the MTT system is lighter, lower & more environmentally-friendly. It is designed on the accepted 1:1.618 presentation standard.

Commercial enquiries:

Donald Yates

CEO / BAppSc BCommEng CertRenewEng

columbusgroup @ iinet.net.au

61 8 9379 9479

61 8 9379 9489 (Fax)

10 Thompson Road
Success Hill WA 6054
Australia

Columbus
group

