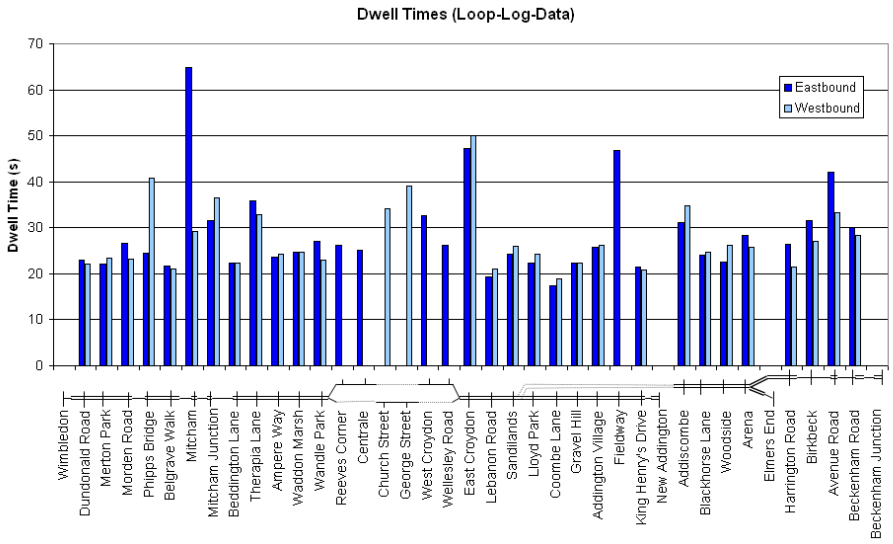
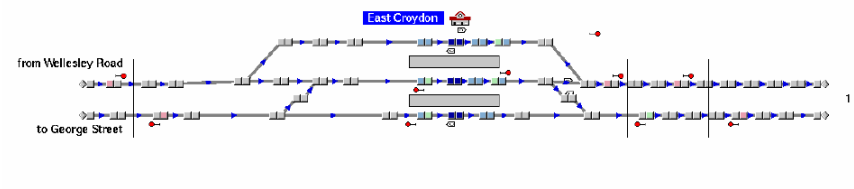
Operation Croydon Tramlink

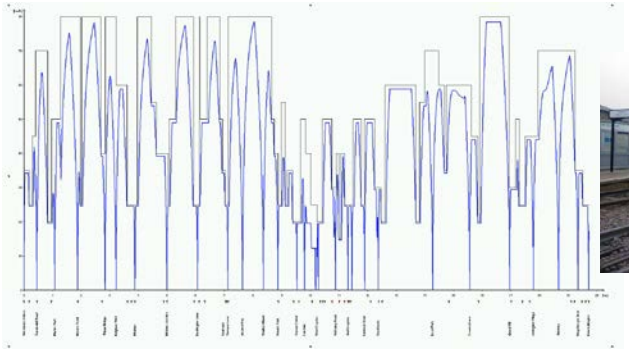
Dynamic operational OpenTrack and power simulation model for London, Croydon Tramlink



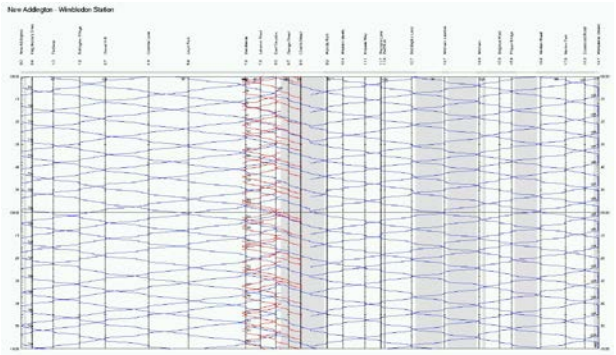
Dwell time Analysis from Loop log data (working days, average for April 2009)



Croydon Tramlink infrastructure captured in OpenTrack



OpenTrack results



Technical Assistance and Operation

Client: Transport for London, London Tramlink
Partner: Mott Mac Donald (2009 - 2010)
Duration: Dynamic modelling and power simulation (2009-2010), Model update (2012-2013), Operation and modelling support (2014-2016)

As part of the on-going strategy for the expansion of the Tramlink light rail network, Transport for London (TfL) have requested the development of an operational and power model to be used to assess the existing interaction between service patterns (in terms of timetable compatibility, operational robustness and potential amendments for operational robustness) against the options for fixed infrastructure and control systems.

This study was awarded to the teams of Mott MacDonald (power modelling) and TTK (operational modelling).

TTK used the dynamic modelling software OpenTrack to set up the operational model:

- Detailed data collection.
- Assessment of loop log data and passenger counting system data over one month real operation.
- Detailed infrastructure and timetable assessment to build the model.
- Compilation of a set of operational requirements to benchmark the model against.
- Close co-operation with the power modelling (parallel workstream) by Mott MacDonald using the Train software.
- Set-up of a full day integrated OpenTrack model of all 3 lines.
- Several rounds of calibration to hit the real run times.

As a result this OpenTrack model in the coming years will support the client London Tramlink testing changes in the system such as double tracking efforts, new vehicles, new timetables, extensions, etc.

TTK's team worked again for TfL during 2012-2013 in order to update the first model with the last network extensions and optimisations (4 lines at this time).

Today, TTK's team continue to support TfL in the use of the model in order to test new network development and operation concepts.