

CASE STUDY



The Challenge

Each new section of Smart Motorway needs unique thresholds, based on the capacity of the road at each point. This varies according to physical layout and how traffic behaves at each location. For early schemes, these capacities and associated thresholds were calculated manually, which was labour-intensive. A method of reducing the workload was required.

In addition, the loop and radar detectors on the motorway network provide 1-minute speeds, flows and occupancies from sites at 500m intervals. This is a vast amount of data, and a tool was required to show this visually.



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Our Approach

We developed the Motorway Traffic Viewer (MTV) to provide a visual representation of traffic data and signal settings on a single plot. This enables users to put current and historic traffic data into context, showing the location of queues and shockwaves, and also how the on-road signalling relates to the traffic conditions.

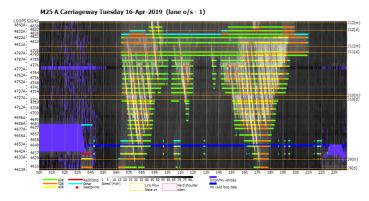


Figure: Example MTV plot

We then developed a website-based tool (SMCALO), based on MTV, to assist in the calculation of thresholds. SMCALO also contains the MIDAS Download Tool (MDT), which makes historic traffic and signal data from the whole of the motorway network available to users. The MDT allows MTV plots to be viewed, graphs to be plotted, and data to be downloaded for further analysis.

The Results

The website tool is located at http://www.mmcalo.org.

The front page of the website contains instructions on how to become a registered user.