



MVIS And Chordant: Real-Time Data Sharing Using A VMS-A Remote Radar Log

Participants:
MVIS, Chordant, TfWM, Birmingham County
Council, Coventry County Council

The Challenge

Cities and regions are constantly addressing traffic- and transport-related issues, whether it be accidents and incidents, venue-related traffic or inadequate public transport locations. Often these require swift intervention of the type offered by MVIS, through their portable VMS displays, and exposure of collected data to multiple organisations via a Data Exchange such as that provided by Chordant.

The Chordant MVIS Partnership: The Value

Intelligent Transport Systems (ITS) technology supplier MVIS have a strong reputation for working with industry leading partners and government bodies in adapting their core technologies to deliver new, innovative solutions. Their latest venture with Chordant is no exception.

Chordant provides data sharing solutions, enabling customers to retrieve immense value from data-driven applications. Chordant has been recognized by numerous analyst firms and organisations for its industry-leading solutions, making a partnership with MVIS an ideal match.



VMS-A – portable trailer based mobile Variable Message Sign

Proposed Solution

In April 2020, MVIS and Chordant conducted a joint trial with the aim of showing how exposing a VMS sign radar log acts as a real-time portable traffic data system. The project involved the use of MVIS' VMS-A unit, specifically, the integrated data collection radar and Chordant's oneTRANSPORT Data Marketplace. All MVIS' range of VMS are solar powered and portable, making them an ideal unit for data collection.

With the support of Coventry City Council, the radar-enabled portable VMS was deployed on a 30pmh single lane road in Coventry approximately 50m from the signal junction, recording the date, time and speed of

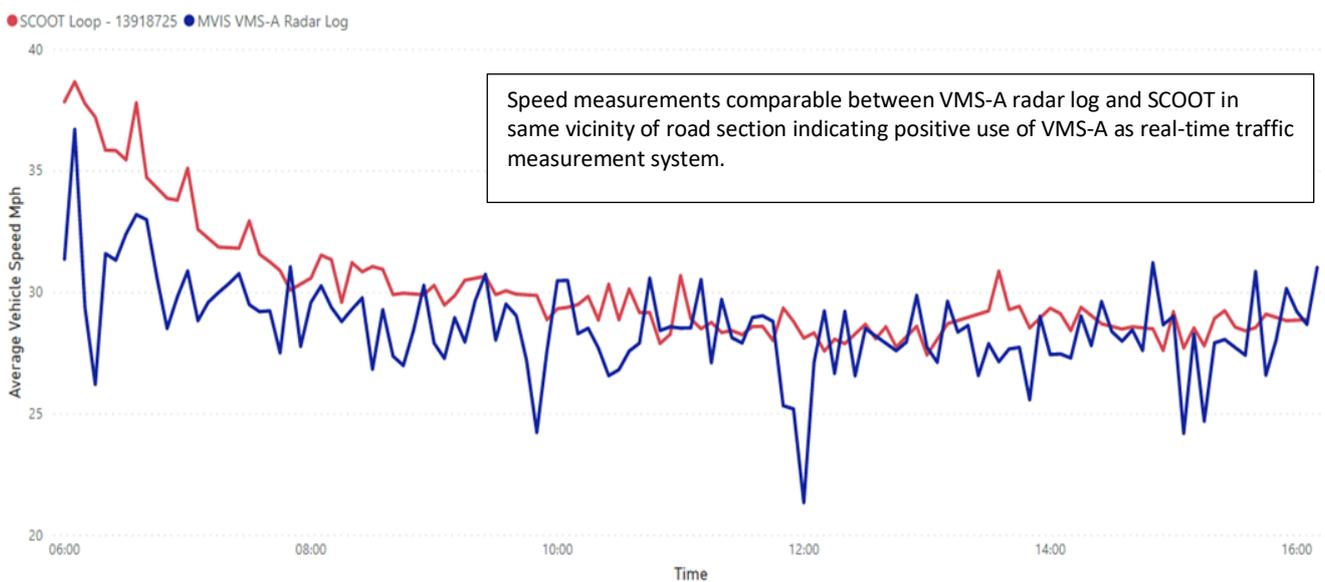
each vehicle passing. The VMS displayed a COVID-19 related safety message to drivers, bringing additional value and safety to the project. The location of the unit was chosen to best provide a comparison of data collection from SCOOT data consolidated in oneTRANSPORT. Over a two-week period, measurement data was retrieved on an hourly basis.

Chordant was able to renew and bring up-to-date data adaptors and MVIS' VMS datasets to retrieve and expose radar logs. These showed comparable traffic speeds and flow relative to Coventry SCOOT data, exposed through Transport for West Midlands (TfWM) on the oneTRANSPORT Data Marketplace.

This project and resulting partnership represent a significant success for MVIS, as the innovative use of their VMS demonstrates the technology's true potential. Showing that through exposing and sharing real-time VMS-A radar data such as speed and vehicle count insights offers even more value to MVIS portable ITS equipment.

Chordant accessed this radar log data from MVIS' server using an API developed to connect with their Webstudio and download the data automatically. Using this, Chordant were able to consolidate and structure the radar log data and insights using their own software, transforming the real-time data into something significantly easier to share with customers and end users.

Average Vehicle Speed MVIS vs SCOOT 17th April 2020 Coventry



The Impact

At a strategic level, exposing, transforming and sharing data through oneTRANSPORT enables local authorities to identify issues earlier and respond with appropriate interventions. Sending real-time updates to traffic message boards will facilitate smoother traffic flows, and travelling citizens may make real-time informed decisions, enabling more consistent journeys on the roads.

“Being able to open up and share the traffic data from our portable VMS enables us to monitor and manage the network in a more flexible way”, stated Coventry City Council’s Ben Gray. “The ability to relocate these

VMS to areas of interest such as roadworks, events and short-term closures means that we can now start to understand the impact in real time and how our actions affect the situation.

Coventry City Council also agreed that “there is a huge amount of potential in what the data can be used for such as the planning of future works and integration into the traffic management systems to use in intelligent automated strategies. The benefits gained from this technology could prove extremely beneficial and another network management tool to help authorities with their ongoing responsibility to manage the network effectively.”

Next Steps: The Future

The implications of this project are far reaching, especially following such a drastic change to life and the economy during the COVID-19 outbreak. Data, as a commodity, specifically in the name of safety, is a highly valuable asset that’s only becoming more important, as local authorities, traffic management companies and many other groups scramble to learn more about traffic trends during a time where we know very little about the impact of COVID-19. “We look forward to collaborating with transport authorities and MVIS in the future to realise the value of data”, said Mika Rasinkangas, President of Chordant.

This case study builds on the oneTRANSPORT Data Marketplace technology Chordant has developed for TfWM through the ‘Playbook’ initiative, helping them capture hundreds of real-world scenes in static, dynamic and historical forms. Leveraging real-time data-driven insights can drive significant and long-lasting change for transport authorities, across cities and across regions.

“This project is particularly exciting for us as it has given our signs, specifically their integrated data collection radar, a much deeper scope than ever before”, said Matt Felce, R&D Manager at MVIS. “We always knew of our unit’s capability, however to have it proven next to SCOOT data is a landmark achievement for MVIS / Bartco UK. The beauty of this solution is its dual functionality, allowing a variable message sign to be deployed for safety and information applications whilst collecting data passively to be automatically retrieved and visualised by Chordant. This can then be used to improve safety even further.

Felce furthermore stated that “working with Chordant on this was nothing short of excellent, forging a partnership that allows us to get the best out of this data in a way that can be used to identify trends in traffic data. We are very excited to take this further and see what incredible applications this solution can be used to help with.”

Further insights are being developed by MVIS and Chordant with input from Coventry and Birmingham City Council network leads that will include vehicle count measurements through processing, and measurement frequency changes. The oneTRANSPORT data marketplace has created new ways for authorities and their partners to work together to build better transport supply chains.

Generally, data has always been important for identifying trends and risks anyway and the VMS-A offers this as a feature as standard. However, what makes this project so significant is the development of MVIS’ API to remotely retrieve the data hourly, providing Chordant with the ability to easily analyse it.

About Chordant

Chordant provides data sharing solutions that enable our customers to realize value from data. Our solutions power data-driven applications for Cities & Regions, Connected & Autonomous Mobility and Complex Infrastructure & Facilities. Chordant has been recognized by numerous analyst firms and organizations for its industry-leading solutions. www.chordant.io.

If you are interested in any of the use cases above, have an interesting new case study idea, and would like to collaborate with us:

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About MVIS

MVIS Ltd are industry leaders in traffic, event and site safety management across the UK. We specialise in portable ITS solutions such as solar powered Variable Messaging Signs (VMS), ANPR, CCTV cameras, data collection and contactless sensors, using cutting-edge, environmentally friendly technology to keep traffic moving and people safe. Our product impact and reliability are well proven, with long term contracts on highway projects all over the country.

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