

Media News

Seeing the road ahead with data visualisation



In construction projects around the world, one of the most important and crucial aspects is the monitoring of instruments to protect the works and its surroundings. This has never more true than in tunnelling.

Manual and real-time measurement of instruments at various points in and around tunnels provides data on displacements, strains, pressures loads, temperatures, flows. Hundreds of sensors on the machines provide information of pressures and forces applied and the reaction of the ground. The data from these sensors must be interpreted within the context of a model of the ground which is built from data in boreholes and probe holes. The reliability of the ground model can constantly improve as the data revealed in machine behaviour, spoil observations and face mapping is used to update models regularly.

Maxwell GeoSystems' award-winning cloud-based MissionOS system, allows project engineers to monitor the performance of the instruments during the construction phase, combine these with machine parameters and relate this to a constantly improving ground model. Data is pulled into the system, processed and combined and then displayed in real time on dashboards and displays, digitising the way in which information is presented and shared.

Driving in a tunnel by Tunnel Boring Machines or otherwise without live reference to the ground model or monitoring is akin to driving a car with headlights off and without navigational aids. ***MissionOS provides a brighter set of headlights to give a clear vision of what is ahead***". Using this active feedback, users are able to take into account all the information to assess whether they are tunnelling within predicted bounds and make adjustments to the processes as necessary.

With Machine learning, MissionOS can also guide the users towards the most effective settings to apply. With its highly configurable, easy-to-use and comprehensive interface, MissionOS can be customised to deliver project data in real-time to the key project stakeholders, allowing them to make timely management decisions and mitigate risks.

In case of any potential problems, MissionOS can be configured to send out alerts and alarms automatically to its system users via SMS messaging and email notification, keeping all concerned parties updated throughout all phases of the project. Implementing and utilising softwares such as MissionOS not only ensures a high degree of oversight, but also helps guarantee safety, quality and a high level of transparent communications, breaking down traditional siloed-working practices, and digitising the way in which data is collected and shared.

To learn more about MissionOS and how data comes alive, visit www.maxwellgeosystems.com

**#MGS #InstrumentationMonitoring #Monitoring #DataCollection #ConstructionTechnology
#MissionOS**

Date: 13/01/2023

Ref: MGS-IMS 01

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