

# VUMA-3D

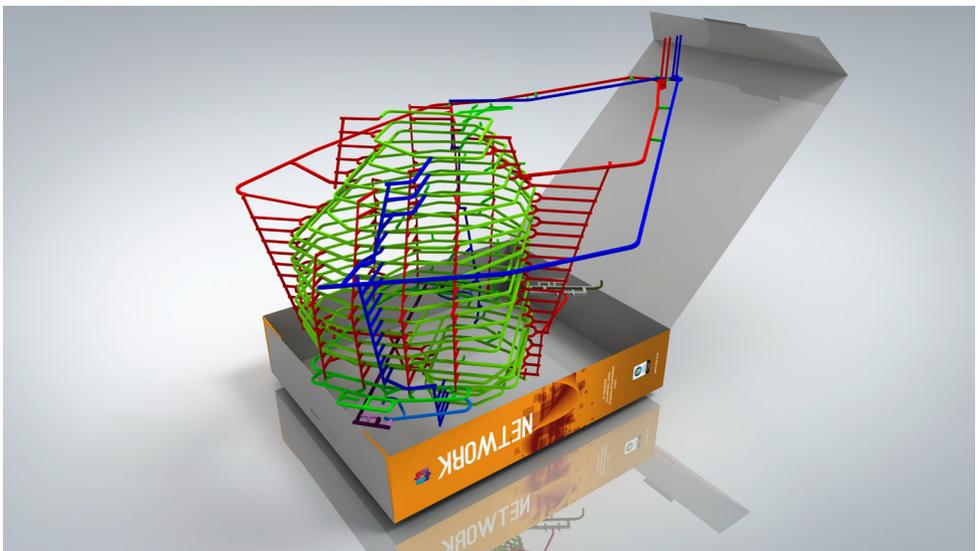
Safety and productivity in underground operations are highly dependent on the environmental conditions in which employees work. VUMA3D-live allows for real-time risk management and rapid response to any alarms. In a large mine it is not always practical or cost effective to install and maintain monitoring instruments in all the underground intake and return airways. Therefore, the use of real-time ventilation software such as VUMA3D-live is important to predict environmental conditions downstream of a limited number of strategically placed measuring stations. Not only can this software predict the conditions in workplaces, it also provides a 3D graphical interface to better visualise the results for temperatures, velocities, dust and gas concentrations, etc.

## WHY VUMA3D-LIVE?

- Real time monitoring
- Visualisation of underground conditions
- Early warning system
- Daily reporting
- Forward emergency planning
- Risk analysis

## BENEFITS OF VUMA3D-LIVE

- Tool for line management to assist in executing their duties
- Provides for a proactive approach
- Visualises the ventilation system
- Optimises the network
- Permits energy management





## HOW IT WORKS

Data can be received through various methods from the measuring stations via the mine network (SCADA). Once VUMA3D-live receives the data it then performs a solution and compares this with the base calibrated model. Using minimum number of measuring stations, the rest of the conditions in the mine are predicted to a high degree of accuracy.

## REPORTING

A report, that is fully is customisable as per client's requirements, is generated at a set time each day and covers the environmental conditions for the previous 24 hours. Real time details can also be viewed in each branch of the model thereby allowing the user to drill down to problem areas in the mine. Alarms to changes in ventilation conditions can be sent via email or sms thereby allowing the user to react more quickly in order to remedy the problem.

## BLAST TRACKING

VUMA3D-live can also interact with the mine's fire detection system thereby allowing for a visualisation of areas affected by contaminants. The daily blast can also be monitored to determine if the mine is clear as well as determine the blast clearance time.

In an emergency situation, as is the case of a fire, the user will be able to perceive which parts of the mine are affected by contaminants in a 3D graphical interface; no more looking at a 2D plan and plotting the fire points thereby improving the user's ability to combat a fire.



**CALL US FOR A DEMO TODAY!**

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