mXrap

About mXrap

mXrap is a software platform that provides geotechnical engineers with many data analysis, monitoring and investigation tools in the form of geotechnical apps. The ACG's mXrap research team developed a number of apps that focus on allowing users to make high-quality geotechnical decisions as quickly and easily as possible. These apps cover the following:

- Mining induced seismicity
- Damage mapping and inspections
- Cave draw and propagation
- Instrumentation
- Rock mass data analysis
- Integration with numerical modelling
- Stope reconciliation
- Backfill design
- Surface monitoring

Further to the apps created by mXrap, the software also provides a platform upon which users can develop their own apps using mXrap's inbuilt tools.

Consortium

Software licences are only available to mXrap Consortium members, along with academic and consulting licence applicants. Membership fees are related to the number of licences and apps required by the Consortium member.

Global Reach

mXrap has a global reach, with mXrap Consortium members, along with research and consulting licence holders located in Australia, Brazil, Canada, Chile, Egypt, Indonesia, Mali, Mexico, Mongolia, Peru, Saudi Arabia, South Africa, Sweden, Tanzania, the UK and the USA.

View the interactive map at mxrap.com/the-mxrap-consortium

Consortium Members

Research Licence Holders

Consulting Licence Holders

mxrap.com
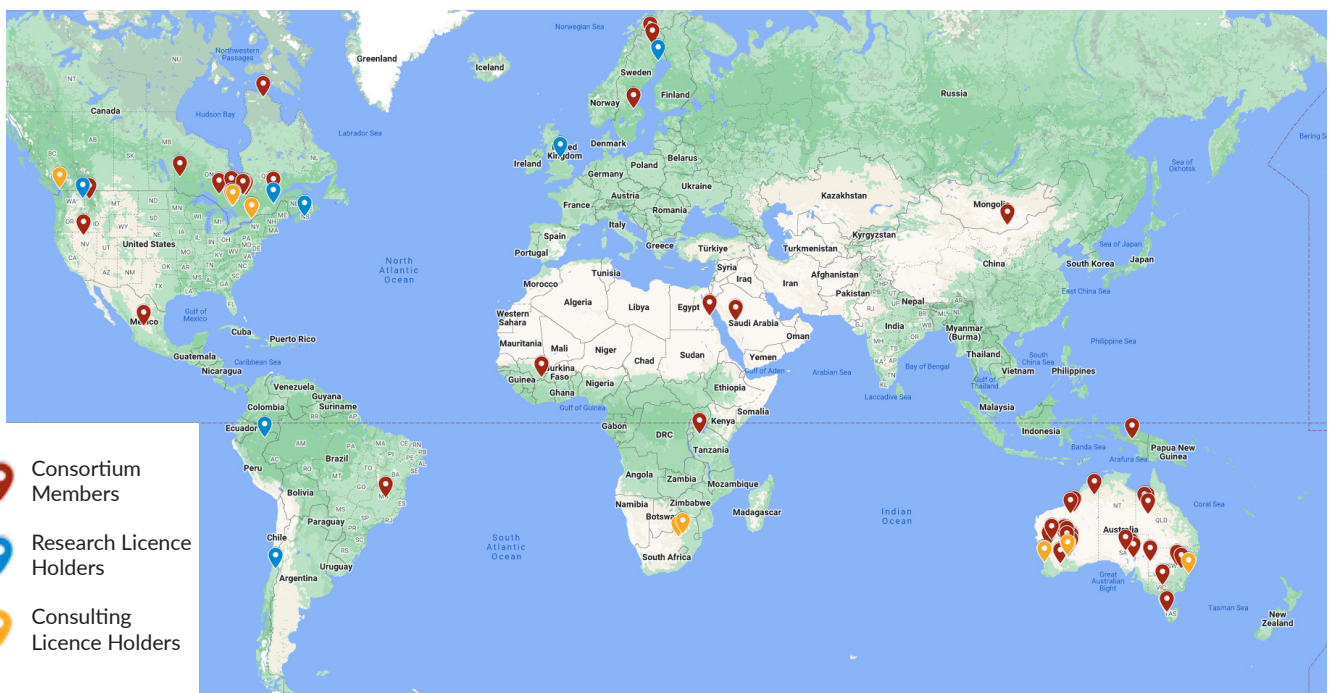
Mining Induced Seismicity

This suite of apps allows users to quickly and easily complete a range of different analyses to better understand the sources and mechanisms of seismicity in their mine and assess the seismic hazard.
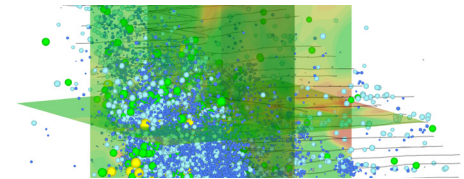
Rock Mass Data Analysis

The Rock Mass Data Analyser App allows a user the ability to input various types of geotechnical data into mXrap, creating a geotechnical database of borehole logging, rock testing, stress measurement and mapping data, which can be easily visualised and assessed in 3D.
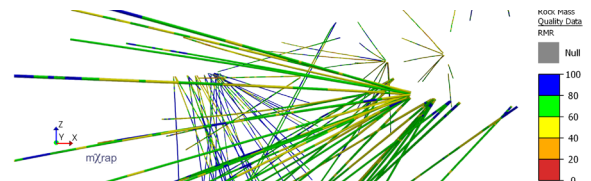
Stope Reconciliation

This app allows simple and fast stope reconciliation on a very fine (<1 m) block-by-block basis. The process is highly automated and generates a database of stopes with data on overbreak, underbreak and the factors which affect these on a stope, face and block scale.
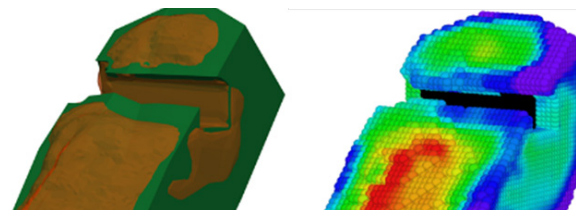
Damage Mapping

Damage Mapping consists of a tablet based web-application, which allows users to collect detailed, standardised data and photos of damage to excavations while underground, and an mXrap application which allows users to access this database and do further analysis.
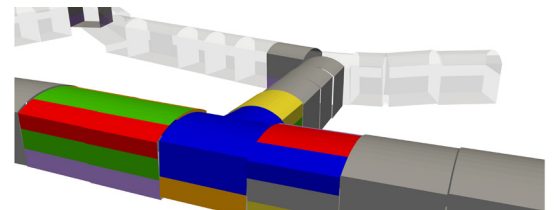
Integration with Numerical Modelling

This suite of apps aims to help users with minimal numerical modelling experience to easily and quickly build models for different packages, including Map3D and FLAC3D. The results are generated in a standardised format for mXrap to read and display results for further analysis.
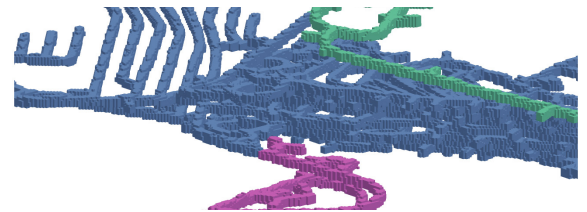
Instrumentation

A range of instrumentation data can be imported into and analysed using mXrap, including extensometers, SMART cables, stress cells and LiDAR scans, among others.
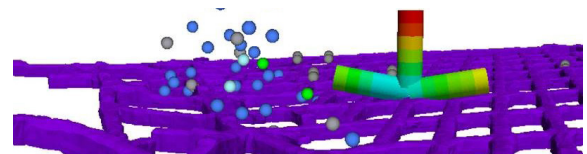
Cave Draw and Propagation

Estimates of height of draw can be made based on production data and compared with seismicity along with cave back interpretations. Cave fragmentation can also be assessed across the footprint and at different heights of draw. Future tools will include ability to assess cave tracker and marker data.
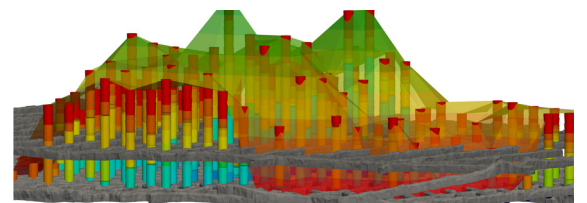
Surface Monitoring

The prism monitoring app gives the user the tools to visualise their prism data in 3D and to see change over time by using charts. There are a number of filtering options (spatial and temporal), along with features to quickly see rates of change for prisms or zones of prisms.

Contact info@mxrap.com for more information