

# Announcement

## Acquisition of MineOptima by RPM

1 August 2017

RPMGlobal Holdings Limited (ASX: RUL) [RPM] today announces it has entered into a share purchase agreement to acquire 100% of the issued share capital of MineOptima, a leading global private company with more than 20 years' experience developing software applications which design the optimal equipment access layouts for underground mines.

MineOptima arose out of the research of the Network Optimisation Group at the University of Melbourne over a twenty year period. The team developed theory and algorithms to design least cost access networks for underground mines satisfying navigability constraints. The research was sponsored by a number of mining companies, including Newmont, Rand Mining and Tribune Resources, as well as the Australian Research Council. A considerable number of PhD projects were also completed in this area of study.

MineOptima are the exclusive developers and intellectual property owners of the Decline Optimisation Tool (**DOT**), Planar Underground Network Optimiser (**PUNO**), Large-scale Underground Network Optimiser (**LUNO**), Gas Gathering Network Optimiser (**GGNO**) and Underground Mine Optimal Infrastructure Designer (**UMOID**) software solutions.

DOT is the class-leading and powerful productivity tool for underground mine design and is utilised by mine planning engineers to guide the design of an optimised (at minimum cost) network of navigable declines in an underground mine servicing a given set of access and haulage points associated with an ore body.

PUNO is a software solution for use by mine planning engineers to design an optimised layout of level development within an ore body that minimises the haulage and development costs for ore extraction on each level of the mine. Based on the theory of weighted Steiner networks, PUNO is able to manage the requirements of different mining methods.

LUNO is a software tool designed to determine the lowest cost tree network to access discrete ore zones and for designing a cost-optimal strategic mine layout. It is particularly useful for finding the best layout for a mine, or extension of a mine, where there are multiple ore zones.

GGNO is a tool to assist in reducing costs in gas-field pipe networks. The output is an optimised layout (template) of a gas gathering network for a given set of wells. It optimises the network topology using a flow-weighting factor to give an upper bound on the required pipe diameters and then transfers this template to a pipeline engineer for hydraulic analysis to verify and nominate final pipe diameters.

UMOID is a software solution which allows a mining engineer to design an optimised network of navigable declines and associated vent raises and escape ways to service a given set of access and draw points in an underground mine. UMOID finds the gradient and turning circle constrained decline and near-vertical vent raises and escape ways, which minimise total development and haulage costs. UMOID attempts to generate declines that avoid no-go regions specified by the user. It can design path or tree network declines and will find optimal locations for breakouts to subsidiary declines.

Commenting on the acquisition, RPM's CEO and Managing Director Richard Mathews said "We are very pleased to have concluded negotiations to acquire MineOptima. This strategic acquisition will fast-track RPM's underground mining software solutions by providing RPM with access to the industry leading tools specifically designed to optimise access layouts for underground mines."

"The MineOptima products minimise development and haulage costs and deliver users a 3D rendering of an optimal decline network for their underground mine taking into account operational constraints such as decline gradient, turning circle radius, and straight sections of the declines near junctions and determines the optimal locations for breakouts of subsidiary declines in the network, given the network topology."

"DOT can automatically select the best option for level access or the best choice of breakout points where there are alternatives. DOT returns centreline strings of the optimal declines, and a summary report showing

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the selected points, their lengths, gradients, development and haulage costs, for each link in the optimal network. DOT includes a tool that allows the user to adjust any design generated by the program, by fixing selected breakouts and freeing others, and then rerunning the optimisation.”

“We are looking forward to harnessing the underlying power behind these unique software tools and building them into our underground mining solutions, including our underground metals solution which was officially launched this week. When combined with RPM’s Enterprise Planning Platform, we are looking to deliver our mining customers with a truly integrated solution delivering the single source of truth across their entire underground mining operations through integration. It is this connected view of operations that forms the Digital Mine.”

Commenting on the acquisition, MineOptima’s Managing Director Professor Hyam Rubinstein said, “We are delighted that our algorithms and software will be available to the mining industry through RPM’s underground mining solutions. This is a wonderful way for our research to be of maximum benefit to mining companies.”

**For further information please contact:**

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**About RPM – [www.rpmglobal.com](http://www.rpmglobal.com)**

RPMGlobal Holdings Limited (ASX: RUL) [RPM] is a global leader in the provision and development of mining software solutions, advisory services and professional development. With history stretching back to 1968, RPM’s experienced global team are the largest publicly traded independent group of technical experts in the world.

Listed on the Australian Securities Exchange on 27 May 2008, RPM is a global leader in the provision of software solutions, advisory consulting and professional development solutions to the mining industry. We have global expertise achieved through our work in over 118 countries and our approach to the business of mining is strongly grounded in economic principles.

**About MineOptima - <http://mineoptima.com.au/>**

MineOptima is a leading global private company specialising in the development of software tools for underground mine planning. MineOptima was originally a spin-off company of the University of Melbourne, building on the mathematical expertise of the Network Optimisation Group under the leadership of Professor Hyam Rubinstein. The group also comprises Dr Peter Grossman, Associate Professor Marcus Brazil and Professors David Lee, Doreen Thomas and Nicholas Wormald. MineOptima were advised on the transaction by Andrew Logie-Smith and his team at Logie-Smith Lanyon Lawyers.

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