

**SIMULATE** is a purpose-built Discrete Event Simulation (DES) solution for Original Equipment Manufacturers (OEMs) to model complex, 3D mining environments using fully customisable, brand-specific mining equipment. SIMULATE enables OEMs to leverage customer data to build a 'digital twin' of any mining operation – open pit or underground – to deliver an accurate representation of any mine sites haulage operations, actively demonstrating the value certain equipment and services can provide.

# Simulate is the sales solution of choice for OEMs globally.

SIMULATE is a simulation platform used by OEMs globally to provide accurate, sustainable, and productive equipment and services solutions for mining clients. Using SIMULATE, users can showcase and articulate equipment value that is quantified and proven through simulated demonstrations, in real time.

# **Benefits**

#### **Consistent results**

Be assured that simulations completed for your customers are done in a consistent manner. Your customer support network will all follow a consistent approach no matter where they are working. Updates to equipment and reports are distributed to users seamlessly so that they are always working with the most up to date, equipment, assumptions and report templates.

#### Fast turnaround

The simple and intuitive user interface helps users turn around simulations very quickly. Haul networks can be built instantly using GPS or many other common design formats. Users are able to sit with a customer and involve them with the model build. Before leaving your customer, you can leave them with a professional report that details the results of the simulation and all of the corresponding assumptions.

#### Deeper relationships

When customers are looking to make a large investment in multiple pieces of equipment, simulating from a single, destination combination may not be enough.

When a customer wants to understand how the entire haulage system is going to perform, stand out from the crowd with Discrete Event Simulation (DES). DES accounts for interaction across the haulage system. Interaction between equipment and also between the equipment and other infrastructure. With a calibrated DES model, every question about changes to complex haulage systems can be tested before equipment is purchased. Each simulation will result in an abundance of information that can then

be used to make an informed decision. Because the simulations analyse the whole system at the same time, you can be assured that you and your customer will be aware of all of the impacts of a change to the system.

Some examples of common customer questions that can be answered using SIMULATE include:

- Will I have problems with interaction between my current fleet and the new equipment that you are proposing?
- How will the new loading unit that you are proposing work with my current fleet?
- Should I separate different trucks in my fleet to stop them bunching?
- Should I make this one-lane haul road two lanes wide?
- Should I tip directly into my trucks or tip to an ore pass?

#### Market intelligence

SIMULATE comes with the largest publicly available equipment library and includes equipment from every manufacturer. The equipment library is updated regularly so that it is always up to date. Having this information available means that it is quick and easy for users to understand the key points of difference between your equipment and the competition. Users can highlight the strengths of your equipment in detail with the customer.

#### Control

Using SIMULATE it is much easier to control the information that your customers are receiving about your equipment. Customer report templates are stored centrally in different formats and languages to cover every customer engagement. Updating the content, or look of a report is simple, so they can always be kept looking good.

It is not expected that every sales team will know exactly how your equipment will perform under any circumstances. With SIMULATE, your application specialists can build performance data into the tool, so that your sales team is armed with accurate information. Before new equipment is available to market, you can put it into the hands of your team to be SIMULATED and keep them on the front foot. The team will then be able to understand what sets the new equipment apart from your current offering and equipment offered by your competitors.

# **Features**

#### Electric vehicle support

With embedded battery vehicle capabilities, SIMUALTE enables OEMs to model the benefits of haulage vehicle electrification. Quickly calculate the environmental and social impacts and considerations along with the financial and operational differentiators between diesel powered and electric vehicles. Using SIMULATE, OEMs are able to demonstrate the various ways their customers can achieve lower carbon dioxide emissions, while understanding the impact on operations when compared to using diesel equipment. Help your customers plan for a lower carbon future through the use of battery electric vehicle alternatives over the long-

#### Configurable equipment library

Your equipment library is under your control. New equipment can be added before it is released so that you can start simulating it when you need to. The equipment library can be extended, to ensure consistent results. Additional information may include fuel used or cycle time for an excavator dependant on material type. Having this extra level of detail ensures that the results from simulation models are consistent. Users always have the most up to date information always at their fingertips.

#### Largest publicly available equipment library

Contains over 1,700 pieces of equipment. Allows users to compare and contrast equipment from different manufacturers. Equipment library is updated regularly with the latest releases.

#### **Enhanced reporting**

Leave your customers with professional looking reports. Reports can be updated and controlled centrally ensuring a consistent approach across all regions. Different styles of reports can be configured for different user groups, ensuring the right level of detail. Language and unit conversion is supported within the reporting functionality.

#### **Equipment** wizard

Create an equipment selection wizard to help your sales people select the right machines for the right job, ensuring a consistent approach from all users.

#### Import GPS data

Roads can be created from GPS traces making model set up quick and accurate.

### Simple, easy to use interface

Get the results you need quickly with minimal training and implementation costs. Easy repeatable training and on boarding of new users.

#### Naming rights are yours

The software can be configured to match your brand. Change the colours, icons and name of the product.

#### Independent, industry standard calculations

All calculations used across the application are industry standard. They have been trusted by the mining industry for 40+ years. Over 300 results, including Productivity and Total Cost of Ownership are available for each simulation run.

#### Flexible licencing system

Licences can be shared across the organisation. If a user is travelling and can't access the licence server, they can take a licence with them.

#### Discrete event Simulation (DES) Engine

Only simulation software with DES can model interaction across a haulage network. Others claim to "SIMULATE" haulage, but only SIMULATE queuing at the loader. HAULSIM's DES engine models all interactions in a haulage system including intersections, destinations and infrastructure like crushers and conveyors.

#### Realistic load times

Calculated for you by combining equipment information, material characteristics, and stochastic variability. Load time calculations can be enhanced by extending the equipment library so that information such as swing time for excavators is adjusted to account for material type and position.

# Stunning 3D user interface

Users can visualise the simulation as it's running ensuring that results are realistic. 3D surfaces with photographic overlays can be used to enhance the experience. Communicating simulation setup or the results of the simulation has never been easier.

#### Multi-lingual support

Support is available for over 10 languages. Not only is the application supported, this functionality extends to the word reports that are to be left with customers.

# **Enterprise Planning Framework**

Enterprise integration and collaboration will deliver the operational improvements mining companies need to realise the next wave of productivity improvements. Whilst most mining companies have realised value implementing an integrated strategy in their Corporate functions, such as finance and HR, they have not extended this to their Technical Mining Operations (TMO). Consequently the TMO is a complex web of point solutions, data sources and silos that delivers complex structures and inadequate functional collaboration.

RPMGlobal's Enterprise Planning Framework (EPF) is a strategic platform that consumes and exchanges data from multiple sources including ERP, Business Intelligence (BI) tools, mine planning and command and control fleet management systems (FMS). It supports management processes, eliminates reliance on disconnected spreadsheets, individual departmental point solutions and fragmented BI technologies. Integrating the data delivers timely decisions-making as well as greater communication and visibility across the mining operations.



# **About RPMGlobal**

RPMGlobal is the global leader in the digital transformation of mining. We provide data with context, transforming mining operations. Our Enterprise approach, built on open industry standards, delivers the leading digital platform that connects the systems and information and seamlessly, amplifying decision-making across the mining value chain.

RPMGlobal integrates the planning and scheduling, with maintenance and execution, with simulation and costings, on RPM's Enterprise Planning Framework, the mining industry's only digital platform that delivers insight and control across these core processes.

RPMGlobal's Advisory Team advise the global mining industry on their most critical issues and opportunities, from exploration to mine closure. Their deep domain expertise, combined with their culture of innovation, and global footprint, ensures our mining customers continue to lead.

RPMGlobal is the global leader in Enterprise mining software, Advisory services and Professional development who operate offices in 23 locations across 13 countries and have worked in over 118 countries.

For more information visit rpmglobal.com or email info@rpmglobal.com.