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## INTEGRATED PTC ADD-ON MODELSEARCH

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Multotec PTY LTD | Mineral processing plants and mining services



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## UNEARTHED THE TREASURE IN THE MODEL DATABASE.

### INDUSTRY

Mining & Metal Processing

### PRODUCTS

Mineral Processing Plants  
Screening Plants  
Polyurethane Products  
Ceramic Linings  
Mill and Scrubber Linings

### LICENSES

ModelSearch

### EMPLOYEES

154

**Mining and Construction Companies Worldwide Face the Same Challenge** Mining and construction companies of all industries know the problem: duplicates hide in their product database, and their number increases with every new design. Until now, there were no efficient solutions to successfully find twins in the CAD universe. This results in engineers repeatedly designing what appear to be new models at real high costs. The mining specialist Multotec from Australia has now found the perfect solution to this dilemma, with help from the other side of the world: MAIT, the software and technology partner for the manufacturing industry.

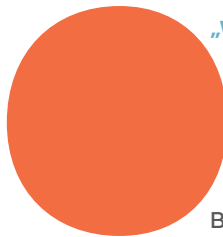
Australia has the world's largest reserves of iron ore, zinc, and gold. Copper, cobalt, and silver are also deeply hidden beneath the continent's soil. To extract these minerals from the harsh Australian terrain, modern, robust, and durable equipment is essential. No wonder that Multotec, as a global supplier of mining equipment, quickly discovered the Australian market. The company provides its customers with the necessary tools for every step, from soil testing and sampling to mining, processing, and transporting

ores, precious metals, and gemstones.

At the main production site in Brisbane, located in the far east of Australia, Multotec engineers continuously design new mining equipment according to their customers' requirements. They rely on the proven product development system from PTC, including PTC Creo CAD software and PTC Windchill for product management. The result of their excellent order situation is a well-stocked warehouse: At any given time, Multotec in Brisbane holds 1,500 to 2,000 different parts in stock, most of which are custom-made.

But do the engineers at Multotec have to reinvent the wheel with every new order? Wouldn't it be more efficient and cost-effective to first search for suitable designs in the extensive CAD directory? Absolutely. However, even leading software solutions like PTC Windchill do not offer a practical solution for finding and matching new designs with existing product specifications. "It was usually easier to design new parts than to search for similar or even identical existing parts," says Ben Lawson, Engineering Manager at Multotec. Easier, but also more expensive. Because, of

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„We are always looking for ways to reduce our costs. And we knew there was great potential in construction for that. But we couldn't unlock the treasure due to the lack of available tools for similarity search. Then MAIT came with ModelSearch – and it exceeded all our expectations. Now we have an effective solution for the pains caused by duplicates and part searches, not just in the construction department.“

Ben Lawson, Drafting Manager at Multotec Australia

course, the costs of redesigning are always much higher than using already existing designs and parts.

#### **A SHOCKING TRUTH AND COMPREHENSIVE KNOW-HOW MAKE THE DIFFERENCE**

In the case of Multotec, there's an added challenge: Although PTC is an award-winning and internationally proven CAD solution, it is not widely used in Australia. As a result, it's quite difficult to find compatible add-ons in „Down Under.“ This challenge was well known to Nigel Kriel, Managing Director of Multotec in Australia. Together with Ben Lawson, he had been searching for a suitable solution for some time.

In November 2020, they found what they were looking for at their subsidiary, LuCoTec. There, a „geometry-based

similarity search“ for PTC Creo by the Austrian software provider MAIT was gaining popularity. Its name: ModelSearch. The data sheet for this solution was shared internally at Multotec, and it quickly became clear that ModelSearch was exactly what Kriel and Lawson had been seeking.

So, Ben Lawson searched for ModelSearch software experts on social media at the other end of the world – and found Senior Product Manager Philipp Hinterdorfer, whom he asked for a presentation of the highly anticipated software solution. Hinterdorfer and his colleague Gerhard Schwab, Partner Sales Manager at MAIT, responded promptly: First, they presented a standard demo using in-house data. Then, Multotec provided their own CAD data for a customized demo. The result of this

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presentation „shocked“ the Australians: „MAIT showed us in one case that we had a specific part in identical form 30 times in the warehouse, with 30 different part numbers,“ says Ben Lawson. A shock with conviction. A few days later, the contract between Multotec and MAIT was signed. „Gerhard and Philipp were the first to truly have a convincing answer to all of our questions,“ explains Nigel Kriel, justifying the decision to go with MAIT.

#### **MODELSEARCH IMMEDIATELY BRINGS THE DESIRED EFFECTS IN DESIGN**

The go-live only took a few weeks. The MAIT team remotely installed their in-house solution, ModelSearch – which, by the way, does not require an interface. It is a fully integrated solution within PTC Windchill. This special feature is possible only because MAIT has maintained a very close partnership with PTC for decades. The Austrians became an early preferred product development partner for the software giant. This collaboration led to the creation of the 3D-CAD geometry search solution at MAIT in Linz, Austria, which is now known as ModelSearch.

The combination of a proven partnership, tested software, and extensive know-how at MAIT meant that for Multotec, the installation of the software

and the integration of the geometric data, the “footprints” of the products, were handled by MAIT. For Lawson and his team, the project effort was minimal. One day, the Engineering Manager at Multotec simply received an email from Philipp Hinterdorfer with the content, roughly: “It’s done.” And indeed, MAIT had delivered the new solution „turnkey“

Since then, the Multotec engineers automatically and in real time receive suggestions for existing similar parts as soon as they begin working in the CAD program and set initial specifications. If needed, they can also search for potential „twins“ at the push of a button. Additionally, because ModelSearch only uses the existing PTC data and is a fully integrated solution in Windchill, users do not need training or to navigate other interfaces in between.

#### **MODELSEARCH IS NOW LOWERING COSTS ACROSS THE ENTIRE COMPANY**

After three-quarters of a year, Nigel Kriel is certain: „ModelSearch has enabled us to significantly reduce our parts catalog. We can now reuse an unprecedented variety of existing parts purposefully, instead of redesigning them. This not only eases the workload in design but also in other departments such as planning, inventory, and manufacturing,“

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says the Managing Director of Multotec.

Ben Lawson adds, „ModelSearch is the best solution for the pain caused by duplicates and the search for parts.“ This „pain“ can be quantified: A new standard part costs Multotec approximately 800 Australian dollars in design. With about ten new parts per month, this results in an annual expenditure of 96,000 dollars – just for the design work. When you add the costs for quoting, manufacturing, inventory, and potential scrap of these items, the overwhelming savings potential of ModelSearch becomes very clear.

However, it's not just the engineers who are convinced by the new software extension for Windchill, but also employees in procurement and service at the mining specialist. „The high value of ModelSearch is not just visible in the design department,“ says Ben Lawson. For example, the solution can be used for service requests, such as whether a customer would be satisfied with a similar product if the desired one is currently out of stock. „Sometimes sales asks us for a specific part with very specific properties. Thanks to ModelSearch, we can respond quickly,“ says Lawson.

In short, after less than a year of use, ModelSearch has already achieved

much more than Kriel and Lawson had long unsuccessfully searched for: more efficient and cost-saving processes across all areas of the company, from procurement to design, manufacturing, and inventory management. And of course, there's also the MAIT team, which Nigel Kriel appreciates: „MAIT is a reliable partner who always finds a solution. But we are also convinced by the very pleasant way they treat us as customers,“ he says.

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