



WHITTLE CONSULTING

BUSINESS OPTIMISATION FOR THE MINING INDUSTRY

Resource Stocks

Leading developer takes its brand to next level

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NOT always but often successful public companies can trace their good fortune to their corporate roots.

Take Richard Branson's Virgin Industries, for example. Although the British tycoon has busily spent the past decade "virginising" everything from aeroplanes to cola, the foundation stone of his success was a once small but private music company called Virgin Music. Virgin Music got its first big break when it won the rights to market Mike Oldfield's multi-platinum album Tubular Bells back in the early 1970s.

Virgin's strong brand recognition and customer base served it well. No more so than when it made the transition to the public arena. It was this private to public transition that ultimately gave Virgin the financial clout Branson needed to diversify out of music and use his entrepreneurial skills to expand into other industries across the globe.

In a smaller way the Whittle name is not dissimilar in stature. While many general investors would be unaware of who or what Whittle is, to geologists, mining engineers and project managers, the company's software is one of their holy grails.

For the uninitiated Whittle Programming (now Whittle Technology) was established in Melbourne in 1984 and is the brainchild of brilliant mathematician and nuclear physicist, Jeff Whittle.

Born in England and educated at Manchester University, Jeff was drawn to computer programming at an early age. And when he came out to live in Australia he took up a job as a computer consultant to the mining industry.

It didn't take Jeff long to realise that the industry would benefit with a program that could process the complex geological and economic data compiled when designing a mining pit. As a result Jeff developed the Whittle Three-D program, which was released in 1985 and rapidly gained acceptance and praise from mining houses around the world.

Two years later Jeff introduced Whittle Four-D to the mining industry, and the program subsequently won the Australian Information Technology Association Software Product of the Year Award. Five years later it picked up an Australian Design Award and had the distinction of being inducted into the permanent collection of the Powerhouse Museum in Sydney. Both Three-D and Four-D have been upgraded and enhanced regularly over the years.

What makes the software so wonderful is its ability to deliver mining companies millions of dollars worth of savings during the course of a mine's life. Adopting the Lerchs-Grossmann method, these two software packages optimise an openpit's mine design to maximise profit and reduce corporate risk.

The software programs determine, with mathematical precision, the optimal economic shape for an openpit mine and can also show the point at which it becomes more economic to move to underground mining. Guesswork and manual calculation of ore block reserves have been removed from the process and this has had a huge impact on the economics of mining worldwide.

In 1995 Whittle launched another product called Opti-Cut. This software optimises cut-off grades over the life of a mine and can be applied to both openpit and underground mines. Clients have reported that it can increase the net present value of a mine by up to 10% by determining the most profitable cut-off grades.



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In 1997 Whittle Four-X was released to replace Whittle Four-D. The successor had all the old functionality but also enabled the operators to investigate an enormous variety of cut-off scheduling, scaling and timing options. Best of all, it allowed companies to simulate complex life-of-mine situations so that the user could gauge the best possible scenario in any given sequence.

Today the spin-off programs are mind boggling with products either in the market or under development designed to support all management and analysis tiers within mining companies. At the analysis end, Whittle now has available Four-X Analyser which incorporates a vast array of mine design tools for geologists and mining engineers. In addition, it offers a modern framework for complete extensibility of the product family as requirements at this level change.

Then there is Four-X Corporate which allows executives to perform "what-if" analyses. Later this year the company will release Four-X Executive which will permit strategic plans to be incorporated in graphical presentations for strategic decision making at the CEO level of organisations.

"We have a suite of new modules being developed," said Whittle Technology's chief executive officer, Wayne Rudland. "The continuous push is towards improved interaction between the various levels of mine management.

"Using our Proteus Environment we're ensuring that there is audited interaction between the mine design team and those managers who need to forecast cashflows, project NPVs, internal rates of return and so on.

"Future modules will provide facilities to analyse hedging, royalties and taxation and what their potential impact will be on reserves and cashflows."

More ...

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