



COMET

Climate Ready

Grant helps reduce energy use in mines

Novel three dimensional laser technology being developed by Western Australian company *Scanalyse* aims to help the energy-hungry mining sector reduce its power use.

Scanalyse's technology is used in mill liners in grinding mills and crushers, which process ore deposits.

CEO Peter Clarke said grinding mills were extremely large users of energy and were very inefficient.

“About 60% of energy use on a mine site powers grinding mills and crushers, but only 1-5% of that electrical energy is actually converted into useful work,” he said.

The company was awarded \$1,779,952 in 2009 from the Australian Government’s *Climate Ready* program.

Peter said the *Climate Ready* grant enabled the company to apply its laser scanner technology – designed originally to alert mine operators to the wear and tear of mill liners – to providing information about energy use.

“The *Climate Ready* grant will enable us to carry out research, which will be used to devise ways to reduce power consumption. By taking measurements, we will be able to draw conclusions about what things need to be changed to improve efficiency.”

Scanalyse is collaborating on the project with the University of Queensland, CSIRO, and Curtin University.

“The subject of the performance of grinding mills has been researched around the world, but still a lot is not understood. With



Scanalyse's three dimensional modelling unit at work in a mill. *Scanalyse* received a *Climate Ready* grant in 2009, and a *COMET* grant in 2006.

our research we will be able to bring to the table measurements that were not previously available, leading to new insights on optimising mill performance.”

Peter says impending emissions trading legislation will focus much more attention within the mining sector on power reduction.

Scanalyse received help in its early days from AusIndustry’s *Commercialising Emerging Technologies (COMET)* program.

In 2006, *Scanalyse* – a spin-out company formed by three Curtin University academics – received \$120,000 to help with management skills, strategic business planning, market research, intellectual property, developing a working prototype, and proven technology activities. Peter said the *COMET* grant also helped *Scanalyse* find investors and personnel.

“The grant really helped us progress our work,” Peter said.

“Our technology can save the mining industry millions of dollars a year in lost income.”

“It gave us some breathing space to overcome technical hurdles.”

Scanalyse’s foundation software was MillMapper, which used three dimensional scanning to detect mill liner failure.

The product helped improve safety by reducing the chance of injury, as well as saving mine operators millions of dollars a year in lost downtime.

“By accurately predicting when mill liners need to be repaired or replaced, we can eliminate unnecessary shut downs. Lost revenue amounts typically to \$50,000 an hour when a mill is shut down, or about \$1 million a day. When liners need to be replaced a mill may have to shut down for two or three days.”

Cracked and chipped liners anywhere on the mill surface can be quickly detected by MillMapper before they lead to liner failure.

“Liners have a relatively short life span and before MillMapper there was no way of reliably monitoring the deterioration of liners throughout the whole mill in a matter of minutes rather than hours. Our technology can save the mining industry millions of dollars a year in lost income.”

Peter says the company has proven its technology in the Australian market, and recently expanded into South America. Distributors have also been appointed in South Africa and the United States.



Scanalyse CEO Peter Clarke showcases MillMapper, which creates a virtual mill to safeguard against damage.

Awards

- Listed in Anthill Magazine’s Top 100 Australian product innovations – 2009
- Winner of the Western Australia Inventor of the Year – 2007
- New Business Award from the International Business Council – 2007
- Co-operative Research Centre Star Award for Small Business Engagement - 2007
- Knowledge Commercialisation Australasia’s State of Western Australia Prize for the best commercialisation opportunity from a Western Australian based organisation - 2006



Climate Ready and COMET

The *Climate Ready* program is a competitive grants program providing grants from \$50,000 to \$5 million on a matching funding basis. The program supports research and development, proof-of-concept and early-stage commercialisation activities to develop solutions to climate change challenges.

COMET is a competitive grants program that helps early-stage growth companies, spin-off companies and individuals commercialise their innovations.

COMET provides access to private sector business advisers and tailored services to help improve management skills and attract capital and partners. It offers grants of between \$5000 and \$120,000 to successful applicants. Projects are supported for up to two years.

AusIndustry is the Australian Government’s principal business program delivery division in the Department of Innovation, Industry, Science and Research.

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