



## Jumbo Vision: Leaping into the fourth dimension

**Resource companies are able to clip millions of dollars off their exploration costs thanks to virtual reality systems supplied by an inventive Australian company.**



Major international oil and gas companies, mining groups, defence organisations, museums and universities are among the clients of Australian company Jumbo Vision International Pty Ltd.

*“As specialists in large screen display and virtual reality systems, our edge is that we have innovative products, we combine different technologies and we have an in-house research and development department.”*

GERHARD KIMENKOWSKI, MANAGING DIRECTOR, JUMBO VISION INTERNATIONAL PTY LTD

The Perth-based company specialises in the design, manufacture and integration of complete systems for virtual reality displays, mission-critical control rooms and advanced remote collaboration systems. “We are pretty unique in the marketplace because we have experience in all three areas and we see these three disciplines now being merged in many industries,” says Jumbo Vision founder and Managing Director, Gerhard Kimenkowski.

Jumbo Vision works in partnership with several European companies, notably TMP Germany, which utilises similar technology. TMP Germany has installed 3D visualisation systems for organisations such as the European Space Agency, Daimler Chrysler, the Fraunhofer Institute and various other universities.

Initially developed by Daimler Chrysler, Infitec is now implemented in many of Jumbo Vision’s products. As Infitec Australasia, Jumbo Vision is now involved in joint product development with Infitec Germany.

Jumbo Vision’s projects range from manufacturing and systems integration for a visualisation room for Geoscience Australia to a 3D cinema and movie for Shell Petroleum Brunei. With an annual turnover of A\$3 million and gross profit of around A\$1.2 million, this 12-member company is braced for major expansion with the opening of its new assembly and research and development centre in Adelaide.

“We specialise in systems integration: merging complex computing with electronic and mechanical innovations,” says Mr Kimenkowski. “We are not inventing everything from scratch. We combine existing technologies with our R&D projects to create a new system. We are quite unique in our mechanical approach. We do a lot of advanced projection systems and very precise mechanics play a big role.”

### Virtual prospecting

Jumbo Vision supplies 2D and 3D systems to the oil and gas industry and its clients include Shell Petroleum Brunei, ConocoPhillips in Indonesia, Chevron, Rio Tinto and Eni in Australia, among many other major players. Massive seismic datasets are modelled and can be displayed in stereo 3D vision. The user wears special glasses and the seismic model floats in free space. Major decisions around planning, drilling and estimated yields can be visualised.

German-born Mr Kimenkowski has extensive experience in audiovisual and multimedia system design, manufacturing and integration. Fellow director Brian Steggall is a retired senior audit partner from former Coopers & Lybrand Accounting and has international experience in auditing and finances.

Jumbo Vision developed a unique system utilising the Infitec 3D viewing system and VR (Virtual Reality) mechanics. It is an out-of-the-box VR centre that is pre-tested and configured, and can be flat packed for worldwide export.

Mr Kimenkowski says that in virtual reality centres, computer-generated seismic representations assist clients like Papuan Oil Search in Sydney to prospect for oil.

“Our technology helps oil companies do well planning,” he says. “They don’t drill straight down, they drill around corners and our virtual reality systems allow them to visualise that.”

“Every time they test drill, it costs on average \$35 million and their success rate is around 30 per cent. With our technology we can improve their success rate considerably as a larger group of experts can visualise and compare seismic interpretation models.”

The same virtual reality technology is used by major universities in Australia for advanced research on carbon dioxide sequestration. It is also used in medical applications, incident research, plant manufacturing and virtual ‘walk throughs’ in architectural and urban planning.

### Remote command and control centres

Jumbo Vision also provides control room systems, mostly for 24/7 mission-critical operations. These control rooms are used for 24-hour monitoring in the resources industry, in manufacturing plants, utilities, power stations, waterworks and for traffic control. “We take sources such as plant temperature, video feeds, etc and show this information on large screens so that several people can see the information at a time,” says Mr Kimenkowski. “In command and control centres we do it in 2D and in virtual reality centres we do it in 3D.”

The future is for several individual offshore control rooms on oil drilling platforms to be consolidated into a single onshore command control room, with a specialist team on duty 24 hours a day. Jumbo Vision is currently helping some of the world’s biggest oil companies to complete just such a consolidation.

### Innovation driven

The systems integration done by Jumbo Vision involves combining audiovisual, computer, design, mechanical and communications technology. The company is presently involved in systems development for advanced tabletops for the defence, resources and research markets.

The highly portable tabletops enable people in different countries or cities to work together around a single image on a flat horizontal screen which responds to touch and can be altered by any of the members. At the same time a vertical screen shows real-time streamed video images of each of the participants. The table can also be moved to any angle from 0° to 90°.

Using their own technology, Jumbo Vision also produces 3D videos for organisations such as Shell Brunei, the Questacon Science Centre in Canberra, the Museum of London and British Council Millennium Products.

The company has a team of film-makers, headed by producer Mark Simpfendorfer, which is currently shooting a one-hour, 3D video on the attractions of Australia to be screened in Europe and Japan. “With 3D, the didgeridoo comes right out at you and you feel you can grab it,” says Mr Kimenkowski.

### South Australia base

Jumbo Vision received A\$1.18million in funding from the Structural Adjustment Fund for South Australia (SAFSA). The fund was a joint initiative of the Australian Government through Invest Australia and the South Australian Government. This money will be used to establish a sales office showcasing Jumbo Vision products, as well as building a new multi-purpose centre which will house design and manufacturing facilities, a multi-purpose 3D and 4D digital cinema and a large-scale VR/simulation centre for research, hire and public testing of new digital cinema concepts.

Mr Kimenkowski says Jumbo Vision will hire 35 additional staff members in Adelaide. The SAFSA funding will also enable the company to start a virtual engineering department, which will provide virtual 3D design and 3D printing facilities for prototypes and virtual factory floor design.

“We’ve always had very good support from the government at all levels,” says Mr Kimenkowski. “It is great to see that Invest Australia and the SA Government share our vision and support our company to realise its full potential.”

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