POWER SOLUTIONS

Media Release

Power Solutions and Flinders University predict better health outcomes

3rd February 2005 — South Australian healthcare software developer Power Solutions is collaborating with Flinders University to develop predictive analytics technology, which identifies trends by mining the huge volumes of data available within a hospital's operational systems.

The new application, called PowerKnowledge Builder, analyses the data and alerts hospital management to trends and adverse events as they occur, through daily exception reporting. Adverse events include those that may impact patient safety and other quality indicators. In addition, the software quantifies clinical and financial impacts such as increased patient care costs and higher-than-average treatment costs and length-of-stays.

Hospitals can also use PowerKnowledge Builder to cross-reference external data such as socio-economic and other statistical data to look for previously unrecognised activity drivers, thus creating powerful new information to support decision-making and drive continuous improvements in underlying business processes. For example, varying available resources to deal with seasonal changes or restructuring outpatient clinics to improve patient flow.

The predictive analytics technology embedded in PowerKnowledge Builder is based on groundbreaking research developed in collaboration with Flinders University.

Research leader, John Roddick Professor of Information Technology within the School of Informatics and Engineering at Flinders University said, "We are working on applying advanced algorithmic, architectural and visualization techniques to the problems of deriving knowledge from potentially large volumes of complex data. Apart from the public benefit, this work is particularly appropriate to the healthcare industry as medical data probably represents the toughest environment for deployment."

PowerKnowledge Builder is part of Power Solutions' PowerBusiness Analytics product suite, which helps hospitals run more effectively as businesses. In recognition of its high level of innovation, the project has been awarded a $1 million AusIndustry R&D Start grant. This innovation will help hospitals turn their exponentially increasing volumes of data into knowledge that can be used to improve health service delivery and resource utilisation.

Power Solutions director, Paul Venables reports that work is well underway on the project. "With the invaluable support of AusIndustry and our new team in place, we are all working very hard to achieve first delivery by the end of 2005, with AusIndustry funding for ongoing development continuing into 2006," said Mr Venables.

"This product will be a major asset to the healthcare industry, where hospitals are always under pressure to deliver more and better quality services with less resources."

Media enquiries: **To arrange an interview with Mr Paul Venables or Professor Roddick, please call 0419-820-958.**

Website: **http://www.power-solutions.com.au**

About Power Solutions

Power Solutions is a healthcare IT systems developer, specialising in decision support, reporting and integration. Founded in 1995 with headquarters in Adelaide, South Australia, Power Solutions has a strong client base in Australia and New Zealand, with an increasing presence in the US market. The company prides itself on product excellence, functionality, technology and price. Partners include Accenture, Bearing Point (Australia), Cap Gemini (New Zealand), and Kaufman Hall (USA).

About the Knowledge Discovery and Intelligent Systems Group at Flinders University

The Knowledge Discovery and Intelligent Systems Laboratory investigates the development and application of advanced algorithmic, architectural and visualization techniques to the problems of deriving, or assisting in the derivation of, knowledge from potentially large volumes of complex data. The three areas use allied techniques and overlapping methodologies although they differ in the quantities of data, the initial information content of that data and the way in which the data is presented to the user.

While the research is widely applicable, of particular interest is our focus on the use of medical, biomedical, health and clinical data. The application of discovery and learning techniques to medical datasets is a rewarding but highly challenging area. Not only are the datasets potentially large, complex, heterogeneous, time-varying and of varying quality but there exists a substantial medical knowledge base which demands a robust collaboration between the data miner and the health professional if useful knowledge is to be extracted.