



# RURAL BROADBAND SYMPOSIUM

IN ASSOCIATION WITH



## REVISED PROGRAMME

### WEDNESDAY 29 MARCH

TIMARU THEATRE ROYAL, STAFFORD STREET

2-5pm Registrations

#### PLENARY SESSION

4.45pm Assemble at Theatre Royal

5.00pm Welcome from Symposium Chairs

**Graeme Osborne**, Chairman, TUANZ  
**Merv Altmants**, Vice Chairman, TUANZ  
**Ernie Newman**, Chief Executive, TUANZ

5.15pm Keynote

**Rick Beasley**

Operations Manager, National Livestock Identification System, Meat & Livestock Australia

Consumers take it as a given that the foods they purchase have underlying systems which ensure the product safety, integrity and traceability. Rick Beasley will describe how Australia has developed the National Livestock Identification System (NLIS) to meet these demands. Although similar to systems being implemented elsewhere in the world, it differs significantly in the use of Radio Frequency Identification (RFID), which allows fast, accurate and automated collection of data. More than 30 million head of cattle are identified on Meat & Livestock Australia's (MLA) Web-based central database – other animals will be added as the need arises. Virtually all information going in and out of the database is communicated electronically. Like New Zealand, Australia's rural sector has a far from perfect telecommunications infrastructure. Find out how this has been overcome with the development of systems that can operate on existing infrastructure.

6.15pm Premier sponsors' address

6.30pm Cocktails, canapés and networking

8.00pm Session concludes. Dinner – delegate's own arrangements

### THURSDAY 30 MARCH

TIMARU COMMUNITY TRUST SPORTS CENTRE, MORGANS ROAD

8.00am Coffee

8.30am Welcome from the Chair

8.40am Keynote

**Rod Oram**

Business Commentator

*At one with the world: how broadband plugs us into the global economy*

Broadband creates communities: of friends; of customers; of suppliers; of collaborators; of scientists; of academics... in fact, of every conceivable permutation of people and interests – worldwide. Rod Oram will talk about how plugging into these global communities anybody, anywhere in New Zealand can make the most of their opportunities and ambitions. They can build effective and enduring relationships with the right people and organisations they need to maximise their potential. But to capitalise on this powerful technology, we will need to pioneer new models and skills in business and other walks of life.

#### RESEARCH & DEVELOPMENT PRESENTATIONS

9.25am Stephen Ryall

Technology Manager, BayCity

Alan Warren

Senior Design Engineer, BayCity

Presenting M3, a telemetry infrastructure that allows both the remote monitoring and the remote control of equipment. Hear how it can be used to watch pressures, volumes and temperatures of farm storage, measure irrigation discharge volumes, record weather conditions, open and close gates, and more. A proprietary data collection unit transmits via Telecom's CDMA network to a central data server. It is then made available to end-users for viewing and reprocessing via Web, email and SMS. BayCity will use FarmVat, an application currently in development for Fonterra, to illustrate some of the commercial benefits.

9.50am Brian Eccles

Managing Director, Concepts Rural Solutions

Concepts Rural Solutions has a plan to provide what farmers have long asked for: an integrated software package that gathers and analyses information in a way that assists with the monitoring of improvements to production systems. Information comes from a variety of sources: processors, exporters, suppliers, banks, advisors, on-farm automated capture devices and the farmer. Captured into a central database the farmer 'owns', it can be made available in paper and electronic form, for day-to-day benefits out on the farm, and into the wider community.

10.15am Raj Unnikrishnan

Marketing Manager, Alcatel New Zealand

10.20am Coffee

10.45am Grant Smith

Science Group Manager – Sustainable Productive Environments, Crop & Food Research

In partnership with growers, Crop & Food Research scientists are developing new tools to improve

farm practices and to position farmers for the future. Increasingly these are Web-based, with information being delivered and exchanged online. Learn how the organisation is overcoming barriers to the uptake of these tools, particularly in remote rural areas, and how it is working successfully to offer the best value to customers at various speeds of Internet connectivity.

**11.10am Garry Waghorn**  
Senior Scientist, Dexcel

Charged with achieving on-farm productivity gains through research and development, Dexcel – an organisation 100 per cent owned by dairy farmers in New Zealand – will present examples of potential improvements to dairying available through enhanced communications technology. It will focus on specific industry initiatives, such as DairyBase, a Web-based tool for capturing farm physical and financial data to allow a greater understanding and therefore improvement of individual farm systems. Hear how improvements in resource use and risk management through access to real-time information and expertise will enable proactive decision-making and improved performance of the entire industry – and improve the appeal of a dairying lifestyle.

**11.35am Ross Glubb**  
Compliance Monitoring Officer, Rural, Environment Canterbury

Environment Canterbury (ECan) is seeking to use the combined capabilities of telemetry and the Internet to encourage the rural sector to self-regulate water use whilst providing the platform for more cost-effective collection of resource information. ECan would like to see water user groups established where telemetered systems monitor flows and water use and feed back real-time resource information via the Internet, enabling users to cut back on water use before restrictions are imposed. The presentation will outline a trial involving five users on the Te Ngawai River who actively manage and share allocated rates or volumes during times of restrictions.

**12.00pm Ministerial Address**  
**Hon. Jim Anderton**  
Minister of Agriculture

**12.20pm Lunch**

**1.00pm Colin Sanson**  
Senior Software Architect, FarmWorks Precision Farming Systems

Traditionally, farm management applications have been stand-alone desktop applications based on vertical market segment. FarmWorks PFS will examine factors that will push farm management applications towards more integrated online models. These include the trend towards larger farm enterprises with multiple properties, which is increasing the demand for multi-user farm management applications, and the upcoming mandatory animal traceability requirements and the use of electronic tags for livestock. The presentation will illustrate how demand for broadband access in rural New Zealand is heading towards a 'tipping point' where the benefits will outweigh the cost.

**1.25pm Nick Pyke**  
Chief Executive, Foundation for Arable Research (FAR)

FAR believes many real-time opportunities which could be provided to farmers through broadband are yet to be developed and delivered to our farmers. Once a week, it supplies just-in-time information on the latest research and how this can be applied on the farm. Due to poor Internet connection options, just 22 per cent of those receiving it do so by email – a figure much

lower than the potential interest. The use of on-farm decision support systems often require detailed localised short term (hourly) weather forecasts to fine tune operations. Learn how arable farmers can benefit from the use of broadband to deliver real-time knowledge and solutions.

**1.50pm Dr Phillip Lindsay**  
Chief Information Officer, AgResearch

AgResearch has a range of applications that support improved decision-making in the pastoral sector. They do so by making effective use of large databases and high quality spatial information, such as satellite imagery and aerial photography. But there's a catch. Reliable broadband connections are required to allow farmers to access these applications and, in turn, run more profitable farming operations - as well as open up a whole new range of opportunities to link together disparate information services and products. Find out what AgResearch envisages will be enabled by broadband networking in the rural sector.

**2.15pm Phil Urlich**  
Investment Manager, Farm Productivity, Dairy InSight Inc

Dairy InSight invests approximately \$44.7 million a year in on-farm research and development. A number of projects currently under way require fast Internet connections to allow farmers to access information quickly and conveniently. Dr Urlich will discuss some of these, among them Farm Dairy Energy Efficiency and Generation Systems. This particular research will examine technologies that may improve dairy shed operations through greater energy and power efficiency, while also seeking to improve milk quality and reduce water use. Learn how this project – as well as others – will provide dairy farmers with data and recommendations from which to base investment and operational decisions.

**2.40pm Craig Holmes** **Bridgit Hawkins**  
Foundation for Research, Science & Technology MediaLab

Farmgate is a MediaLab collaborative research group established to investigate and commercialise novel uses of ICT for the primary sector. Find out how MediaLab and the Foundation for Research, Science & Technology are working together to develop and support research. The presentation will include a review of the 2006 programme, including work with Massey veterinary epidemiology scientists to detect correlations between environmental conditions and specific animal health issues, and examining methods to improve energy efficiencies, and water and fertiliser management.

**3.05pm Virginia Mitchell**  
Account Manager, Asnet

**3.10pm Coffee**

**3.35pm Sandra Daly**  
Director, Communications and Infrastructure, New Zealand Food Safety Authority

NZFSA provides assurances about all of New Zealand's food exports – its Ecert product is already providing electronic export certification. The process of providing these assurances involves both gathering and distributing extensive information, which has immense value to a wide range of people. The presentation investigates some of the potential uses for this data: meeting international consumer and regulator requirements for information about food exports; providing direct feedback to farmers on products and management of emergency

responses. Also see how NZFSA is reviewing New Zealand's domestic food regulatory programme and ways of linking all 74 territorial authorities.

**4.00pm Mark McAtamney**

Chief Information Officer, Ravensdown Fertiliser

Ravensdown has long recognised a gap in the final leg in the supply chain, namely the physical application of fertiliser onto the paddock. To address these concerns, the company is working with a number of transport spreading operators to introduce technology that ensures accuracy of spread and proof of placement. The presentation will explain how Ravensdown transfers work orders directly to the trucks via cellular networks. An onboard touch-screen computer gives sub one metre driver virtual guidance to the specified spreading width required. An overall report is then distributed directly to the customer, providing application records for farm management purposes and a 'proof of placement' for environmental compliance.

**4.25pm Dr Geoff Henshaw**

Technical Manager, Kahne Ltd

**Mike Eivers**

Executive Chairman, Kahne Ltd

Kahne Ltd is developing bio-telemetric productivity tools for dairy and beef farming. Thanks to an ingestible rumen bolus and telemetry infrastructure, Kahne has developed a system to enable remote monitoring of physiological parameters – such as pressure, temperature and pH – within the rumens of dairy cows. Data is transmitted out of the animals to a wireless receiver on the farm. This is then relayed to a remote server via a CDMA modem, enabling information from individual animals to be accessed in real-time via the internet. This presentation will describe the commercial devices involved and explain the time sequence data. It will also look at the application of the devices to the monitoring of animal/herd health, and optimisation of feed supplements.

**4.50pm Craig Purcell**

Manager, Traceability, Livestock Improvement

A National Traceability initiative has recently been established. For 18 months, a team at Livestock Improvement has been working through the practicalities of putting a farm-to-fork traceability system into place. Key aspects of integration across different platforms, the speed that participants expect information, the rural communications challenges are all being addressed. A presentation from Livestock Improvement's Traceability Team, which utilises MINDA and Protrack, will show how animals are recorded electronically in the field and at the dairy, and verified onto a national database.

**5.30pm Summary from the Chair**

**5.40pm Plenary sessions conclude:** Delegates bus to Timaru Landing Service Building, 2 George St. (Entry down the carpark side of the building.)

**6.00pm Cocktails and dinner**

**7.00pm Keynote: Don Nicolson**

Vice-President, Federated Farmers

**9.30pm Dinner concludes**

## FRIDAY 31 MARCH

### TIMARU COMMUNITY TRUST SPORTS CENTRE, MORGANS ROAD

**8.00am Coffee**

**8.30am Opening remarks from the Chair**

### BREAKOUT WORKSHOPS

**8.40am- Delegates choose one from the following options**

**10.10am** (all workshops run from 8.40-10.10am)

#### OPTION ONE Practical applications on the farm

**1. Brent Paterson, 2005 E-Farmer of the Year**

How does the Farmer of the Year use advanced communications? Learn first hand how Brent Paterson has adopted technology to increase efficiency. He will use 'push-to-talk' to communicate live with his shepherd, and show how broadband is used to download records and set up the automated drafting system for his stud sheep operation. Learn about his use of the Web-based feed budgeting programme farmax, Internet banking, and emailing financial data to a central server for security and insurance purposes. Paterson will also talk about developing his new recruitment business Rural Directions Ltd, and how the Web is being used to optimise the business.

**2. David Walker, Rural Strategy Manager, Telecom**

David Walker is a man with a mission: to bring about the biggest change that this generation of New Zealand farmers will experience - the broadband Internet revolution. A Manaia, Taranaki, dairy farmer for over 30 years where on farm technology has been adopted, he has spent a career juggling farming commitments with jobs in rural business. He'll discuss where ICT is heading on farms.

#### OPTION TWO Practical applications in rural technology and delivery

**1. Murray Pearson, Senior Lecturer, University of Waikato**

The WAND group at the University of Waikato has been working on a wireless rural networking system that enables farmwide, low-cost broadband access. A trial network has been constructed on a Matamata dairy farm that connects smart technologies to the dairy shed and house, also providing wireless access for handheld devices and sensors. Practical applications include Internet access, database connectivity, remote monitoring, security video and voice over internet protocol (VOiP). In addition, a small rural village west of Palmerston North with no commercial broadband connection (the nearest DSLAM is 15km away) has been established as New Zealand's first example of the provision of high-speed Internet to a whole community from one satellite connection. The WAND group is deploying a Wi-Fi network to cover the 80 local households using the school's IP Star satellite connection. Learn about the challenges and solutions to providing full coverage, including houses 'shaded' by trees and hills. Models will show how full farm or multi-farm Wi-Fi coverage can be costed and implemented. Ownership and governance models will also be discussed.

**2. Jeremy Gulson, Senior Business Development Manager, Terralink**

The rural sector often involves remote locations and long distances, which means the communication of data via mobile networks has become increasingly important to rural businesses looking for operational efficiencies. From helping farms meet European supply chain export requirements, through to measuring

agricultural spray areas for environmental legislation, to ensuring emergency services reach every corner of the country, Terralink increasingly requires broadband access. Jeremy will discuss how this convergence is underpinned by the development of rural broadband networks in New Zealand.

### **OPTION THREE Practical applications in rural health**

**Dr. Stuart Gowland**, Urologist and Director, Mobile Surgical Services Project

A surgeon, a rural GP and a rural nurse will give presentations on creating a viable rural health sector. See a live demonstration of the 'surgical bus' in its role performing day surgery. Find out how video communication is allowing advanced initial training and review, and how the communications component of the project is now allowing rural medical professionals access to shared technologies, such as: ultrasound, echocardiography, retinal photography, and colposcopy. Also, learn about the latest project, a potential roll out of four megabit per second connections to rural general practices.

### **OPTION FOUR Practical applications for rural life**

**1. Brent Esler**, CEO, Combined Rural Traders Society Ltd

Established in 1963, CRT is a rural supply cooperative servicing 20,000 farmer shareholders. With 23 CRT FarmCentre retail stores throughout the South Island, a seed business, a stock feed business, the CRT credit card, along with South Island wide fuel distribution and a \$400 million turnover, CRT is at the heart of the rural communities they serve. Hear how CRT plans to use tomorrow's technology to reduce costs and deliver better profits to their shareholders.

**2. Jacky Stafford**, National Councillor, Rural Women New Zealand

What if ALL rural New Zealand had ubiquitous high-speed connectivity as part of their everyday life? Jacky Stafford will talk about what this would mean to the quality of lifestyle that rural New Zealanders could enjoy. She'll look at the benefits of school children remaining in their home district, and many farm workers applying for every farm vacancy – no matter where they are, professionals happy to live in small communities because broadband is helping them to be thriving global businesses in the outback of New Zealand.

**3. Murray Goodman**

Business Manager - Network Services, BCL

**Daryl Aim**

Principal, Kuranui Primary School

There's a revolution happening in rural schools all around New Zealand. Schools that were once beyond the reach of even an acceptable Internet connection are now connecting into some of the most advanced broadband applications available, including multiple-participant international video-conferencing. Learn how Kuranui Primary School, in rural Waikato, was one of the first schools to use a wireless broadband service delivered over BCL's Extend network – and how the technology is transforming pupils' learning experiences (as well as the wider local community through adult education classes).

**10.10am Coffee**

**10.35am Tony Gibbs**

Account Manager, Tyco Electronics

## **BROADBAND SECTOR BY SECTOR**

**10.40am Horticulture sector**

**Ron Gall**

Business Manager, Horticulture NZ

The use of online resources and Web-based tools enables growers to spend more time working on their business, rather than in their business, to increase productivity. However, the slowness of access to this information provides a real disincentive to growers to access the resources available over the Internet. Gall will discuss how this means the inability to send data and files to growers away from urban centres; how, as a result, they are becoming increasingly isolated in an environment where information exchange is vital; and how it means they are less able to effectively play a role in the development of the industry.

**11.00am Dairy sector**

**Dave McPherson**

Fonterra Milk Supply – Fencepost and Technology Solutions Manager, Fonterra

Fonterra's supplier website, Fencepost.com, is used by member dairy farmers to monitor their business performance, as well as to stay in touch with the company and each other. More than 70 per cent of the organisation's farms are registered to use the site (which account for more than 80 per cent of the company's national milk production). McPherson will outline how a wide range of communication tools, productivity tools and interfaces are used on a daily basis by farmers (including Farmsmart, a training initiative that provides basic computer skills).

**11.40pm Meat and wool sector**

**David Douglas**

Director, Meat & Wool New Zealand

The Meat & Wool New Zealand representatives will discuss how the widespread adoption and availability of broadband Internet has the potential to deliver a wide range of benefits for sheep and beef farmers, their families, their communities and the industry as a whole. The presentation will examine the potential gains to be made and will also feature a detailed case study of the emerging benefits that Landcorp – the country's largest commercial farm enterprise – is experiencing from the adoption of broadband.

**12.20pm Address on behalf of the Minister of Communications:**

**David Smol**

Deputy Secretary, Resources and Networks Branch, Ministry of Economic Development

## **PANEL DISCUSSION**

**12.40pm Creating a collective rural sector vision**

**Graeme Osborne**, Chairman, TUANZ; **Barry Payne**, BayCity; **David Walker**, Telecom; **Dave McPherson**, Fonterra; **Craig Purcell**, LIC; **David Douglas**, Meat & Wool New Zealand

A series of five-minute presentations from each of the panel, covering: a sector vision; summary of observations from each of the panel; and a detailed overview of what needs to be done to achieve the goals within an agreed timeframe. Followed by an open forum.

**2.00pm Closing remarks from the Chair**

**2.10pm Conclusion and takeaway lunch**