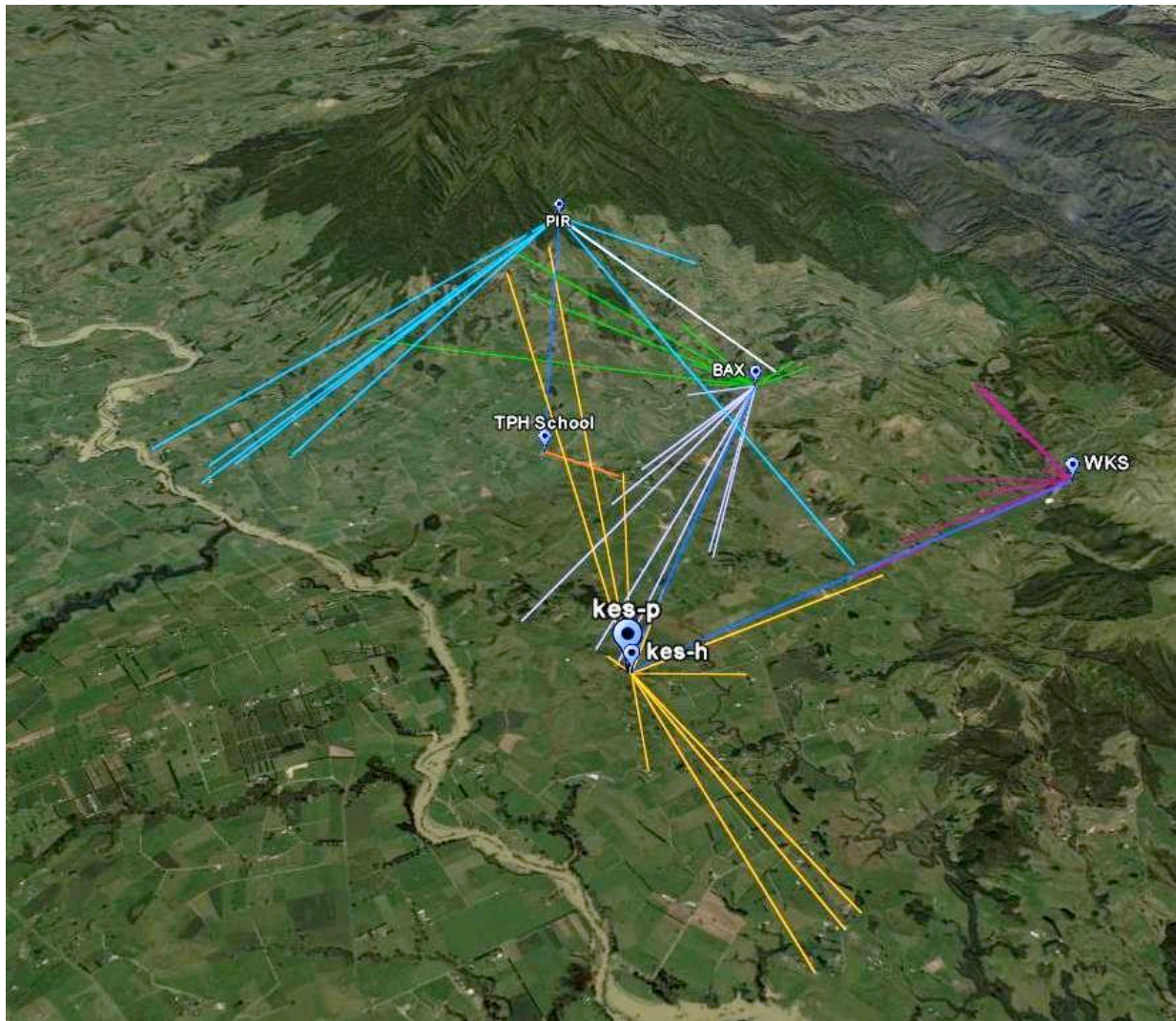# The Te Pahu Community Network

Celebrating a community-based initiative

to bring broadband to Te Pahu

March 2009

The Te Pahu Community Network is a part-community owned and operated initiative. It is a rare beast in the globalised world of telecommunications infrastructure and, as such, it is worth taking a moment to reflect on its history and development.

1

In New Zealand, as in many other parts of the world, geography has proved a key factor in determining who has access to broadband. Rural communities, in particular, have been identified as disadvantaged in terms of such access in that many rural areas are served by wiring and exchange equipment which is sufficient to supply – albeit often poor - telephone connections, but not broadband. The typography of these areas can make equipment upgrades difficult and expensive and low population density provides little incentive for commercial providers to upgrade these systems.

Hilly Te Pahu

Although the locality of hilly Te Pahu fits the profile of a topographically challenging area for the provision of telecommunications infrastructure, its resident population does not fit the profile of a disadvantaged rural community, quite the opposite, in fact. Indeed, members of this small community have demonstrated know-how, determination, and resourcefulness in bringing their own wireless broadband to an area largely overlooked by the giants of the telecommunications industry. Theirs is an inspiring story that needs to be told, and while this account does not do their story justice, it aims to celebrate their achievement and to act as a brief historical record of their undertaking.

In 2002, Te Pahu School was connected up to broadband by Murray Pearson and a small team of people working out of the University of Waikato's Computer Department on a project connecting rural communities to broadband via a wireless platform. At that time, local residents were involved in discussions about joining their homes to the network. However, for a combination of reasons, including perceptions that the cost was prohibitive and difficulties in arranging a suitable

connection to the network, coverage of CRCnet was not extended to the wider community at that juncture. Even so, a seed of interest was sown and two enterprising locals, Gerry Kessels and Wayne Humphries, continued to look for cost effective ways of bringing broadband to Te Pahu.

In 2005 these men, in conjunction with another, John O'Donoghue, recognised the opportunity provided by the government's announcement of a Broadband Challenge Fund to accelerate the uptake of broadband in remote and underserved rural areas. They seized the moment (as it were) and gathered around them a hard-working group of locals, including Sharon Jefferies, Louis Paulussen, and Jim Fulton to mobilise the local community and prepare and submit a two-staged application to government for funding. After an initial Expression of Interest was successfully filed, a HUGE amount of work from this dedicated band went into preparing a 179 page submission. It contained signed commitments for cash and in-kind contributions from 35 interested local people, and demonstrations of capability and technical plans from 2 technology-related partners, Rural Link Ltd. (a joint venture enterprise between Waikato University and the software firm Rezare), and Lite-up Ltd., John O'Donoghue's company. The application was successful and, as a result, $47, 000 of an estimated cost of $72,000 was granted to fund broadband into 35 homes via a backbone radio link to central city Hamilton.

In December 2006, the Te Pahu Broadband Society was established. It was the legal entity held accountable for receipt and responsible use of government funds, the achievement and reporting of project milestones, and the successful completion of the overall project. It was also the owner of the local network infrastructure (the repeater stations and associated hardware).

Wayne and Rex During Installation

In March 2007, after Rural Link had installed the initial backbone

infrastructure (the main mast and 2 repeater stations), roll-out to households began. The roll-out involved a small team of tech-savvy local volunteers working with each individual householder to install the Customer Premise Equipment (CPEs)—the box that would receive and send messages from the home computer to the network. By 28th May 2007, when the Te Pahu Broadband Society held its first AGM, all householders who had signed up for broadband were online and many more were considering take-up.

In March 2008, at the time of writing this paper, and as the Society heads towards its second AGM, the community-based network is running successfully into 77 households (more than double the original number of applicants) It is organised as follows: Rural Link, the technology partner, acts as the Internet Service Provider (ISP) with responsibility for network backbone operations and management; the community's own technical people continue to volunteer their time helping with CPE problems and also doing the neighbourly thing supporting each other to use the technology; and the Te Pahu Broadband Society's steering committee maintains a watching brief and negotiates, as necessary, on behalf of its members.

The success of this venture can be measured by counting the number of people who have joined-up and the number still lining up to join. But a more significant measure is the pride with which many members talk about *their* achievement in developing and supporting this community initiative and the sense of empowerment they communicate in asserting themselves and not letting geography become destiny.

There is little doubt that the community network will face new challenges as time goes by. However, if these challenges are faced with the same energy, determination, and co-operative spirit employed by the instigators of the project and its pioneering members, they will not be insurmountable.

Snippets from those involved with the initiative

One of the representatives from the Ministry of Economic Development said about Te Pahu's achievement: *"All credit to them. They've done an amazing job… How many can band together to build a network? …They were the fastest of all of our recipients to finish their contract…They are models for the rest of the country."*

One of the householders using the network said: *"It's a credit to this community…It's a real demonstration of what can happen when people get together with a common cause and a willingness"*

Another householder said of the project's instigators: *"I was just so impressed and humbled to think that they had put so much effort into it, far more than as a community we could have expected. For the future I hope that, that people don't forget all that, as time goes on."*