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# Rural real time data acquisition

- Uncontrolled environments
- Poor power reliability
- Variable availability of a data connection
- Equipment installed in rugged conditions
- Accuracy and reliability still required

In summary - is hard!

# What makes telemetry hard?

- The easiest available data connection is via cellular networks, or you extend / build it yourself
- Broadband is not always available in rural areas
- This is a niche application for a Telco. They are not resourced to understand or support it

# The application

- To log irrigation water use
- To collect data for use by regulators
- To make the data easily available to users for management
- To be low cost
- Easy to use and low maintenance
- Option of real time was critical for some situations

# The Product

- Hardware to operate in the field
- Display data on a web site for users
- Supply raw data to the Regional Councils
- Will work over either cell network
- Able to provide data where no connection is available (not real time!)



## List Consents

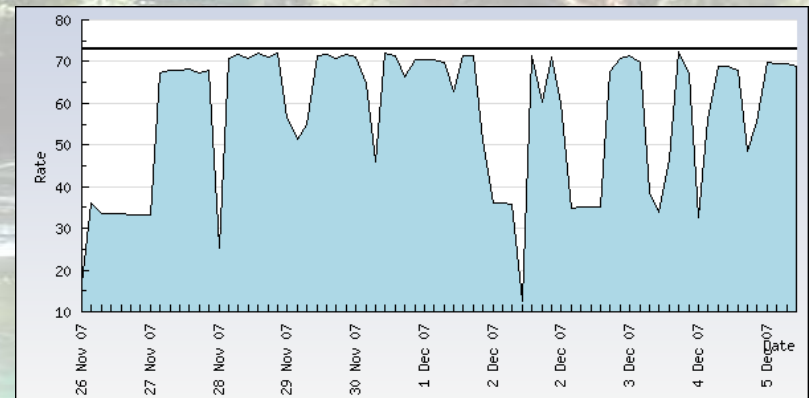
[New Consent](#)

[List Consents](#)

Project	Area	Name	Description	
Te Ngawai	Te Ngawai	Glenlire Farms	Glenlire Farm 2 Sites - combined Flow Rate Max 73 l/sec 7 day Combined Take Max 40471 m3	<a href="#">select</a>
Te Ngawai	Te Ngawai	M&A Hawkins	Consented Rate Max 64 l/sec Consented Season Take m3	<a href="#">select</a>
Te Ngawai	Te Ngawai	Rock Farm Ltd	Flow Rate Max 38 l/sec 7 Day Total max 19584 m3 Season Total ? m3	<a href="#">select</a>
Te Ngawai	Te Ngawai	Ryan Farms Ltd	Max Flow Rate 45.5 l/sec 7 Day Max Total Take 26208 m3 Season Max Total Take ? m3	<a href="#">select</a>
Te Ngawai	Te Ngawai	Te Ngawai Downs	Max Flow rate 30 l/sec 7 Day Take Max 18144 m3 Season Take Max 427500 m3	<a href="#">select</a>

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Records from 0 to 5 (5 total)



### menu

- Environment Canterbury
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    - Ryan Farms Ltd
    - Te Ngawai Downs

### Change Alarm

[New Alarm](#) [List Alarms](#)

Title

Alarm Expiry  yes  no

Alarm Requisites

Alarm Type

Consent Limit:

Alarm Specifics

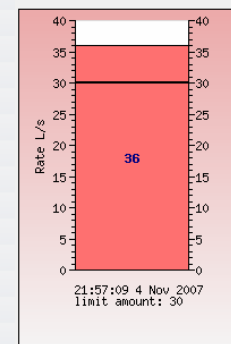
Adhere to season?  yes  no

Alert

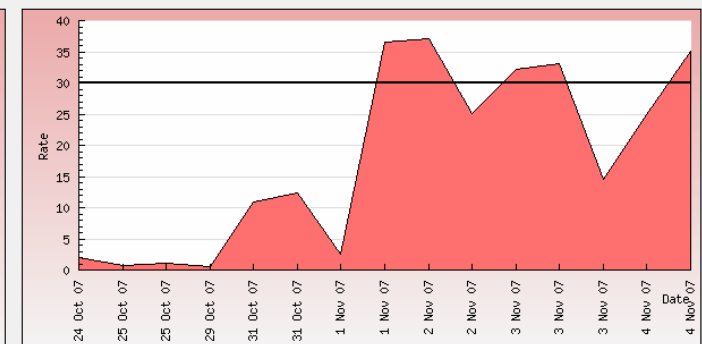
Alert Method

Disable Alarm  yes  no

Rate of flow alarm (30 l/s)

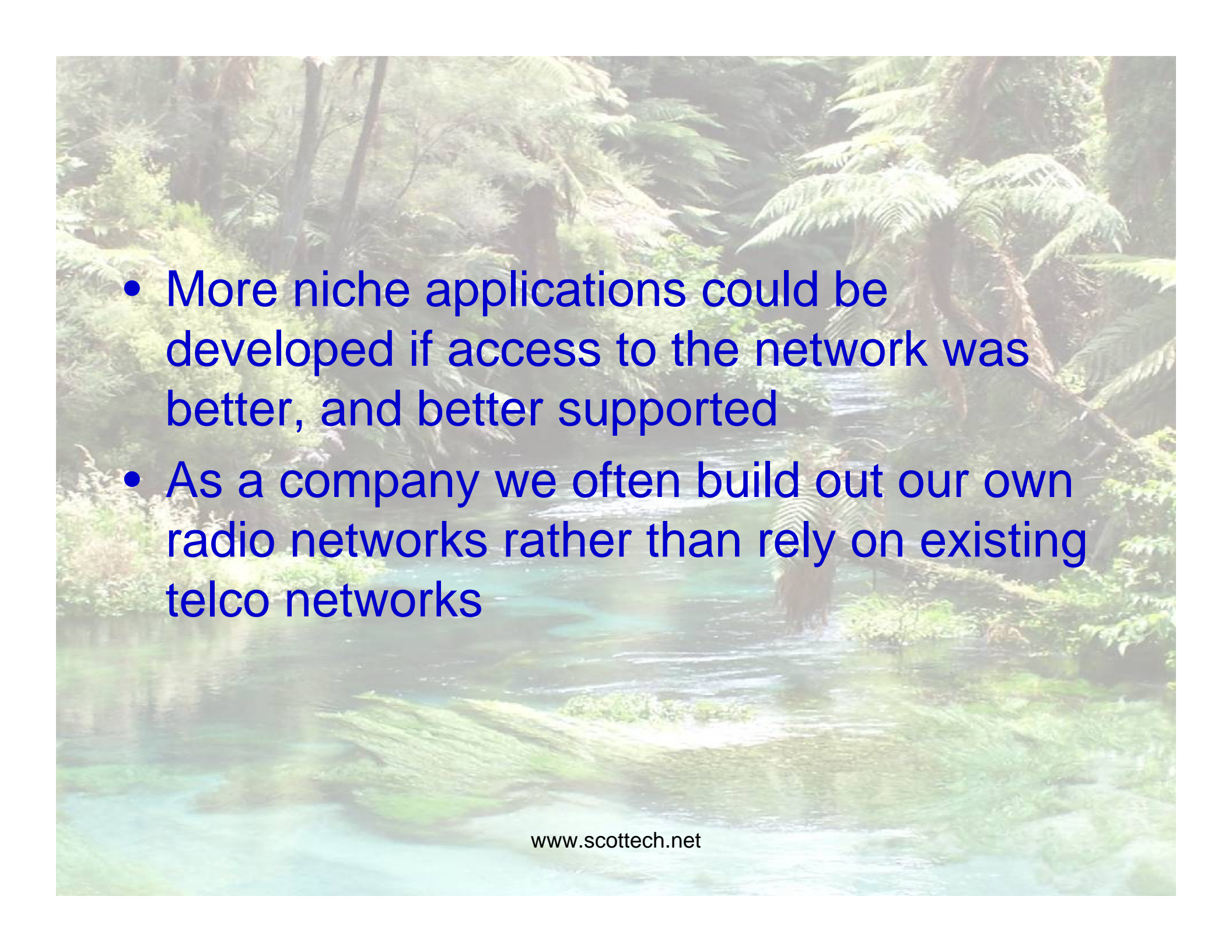


Rate of flow alarm (30 l/s)



# The challenges

- Developing a product that relies on a third party that does not understand the application
- A good product is developed from a good understanding of the application and users needs
- Telcos are pushing their own products and services, over network capability

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- A lush tropical forest scene with a stream and ferns. The image shows a dense forest with many large, green ferns and other tropical plants. A stream flows through the center of the forest, with a person standing in the water in the distance. The overall atmosphere is serene and natural.
- More niche applications could be developed if access to the network was better, and better supported
  - As a company we often build out our own radio networks rather than rely on existing telco networks

# Other applications

- We have other applications that could be developed with the right
  - Reliability (including diversity)
  - Coverage
  - Technical support
  - Cost

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- Other resource consents (mining/industrial)
  - Real time traffic monitoring
  - Baseline data acquisition
  - On farm weather monitoring
  - Rural fire management
  - Critical alarming
  - Time critical resource management
  - Volume applications are not everything!