New Zealand’s National CORS Network
The PositioNZ Network

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The New Zealand Situation

New Zealand Geodetic Datum 2000
- established in 1998
- semi dynamic datum
- nominally referenced to 2000.0
- includes a deformation model
- aligned to ITRF96
New Zealand’s CORS Network

PositioNZ Network

- 35 on the mainland of NZ
- 1 on the Chatham Islands
  - Original station on Chatham Islands was decommissioned in 2012
- 3 in Antarctica
  - 2 operated by UNAVCO as part of the POLNET Project

The PositioNZ Partnership

LINZ and GNS Science have a 12 year partnership to provide the National CORS Network - PositioNZ
The purpose of the network

To maintain the relationship between NZGD2000 and ITRF96 over time

To monitor tectonic plate movement at the national level

To provide a real time network to encourage and support GNSS usage in New Zealand
The purpose of the network

To maintain the relationship between NZGD2000 and ITRF96 over time

LINZ will soon be producing its own network time series

LINZ is a data centre for APREF and is moving toward becoming an analysis centre

The purpose of the network

To monitor tectonic plate movement at the national level

Original deformation model (version 20000101)
Updated deformation model (version 20130801)
The purpose of the network

To provide a real time network to encourage and support GNSS usage in New Zealand

CORS related products and services

Cadastral Surveys connecting to PositioNZ or GeoNet

- **GNSS Products and Services**
  - **RINEX Data**
    - Daily 30" Second data
    - Hourly 30" Second data
    - 15 min 1 Second data
  - **PositioNZ-RT Service**
    - 1 second RTCM data
  - **PositioNZ-PP Service**
    - Online GNSS Post Processing (to be released)
CORS related products and services

GNSS initiatives are supported in the **LINZ 2013-16 Statement of Intent**

- "recommendations to improve the current delivery of geodetic services to customers who are increasingly using global systems such as Global Navigation Satellite Systems (GNSS) and datums”

- "enhancing the delivery of our GNSS services which enable data to be submitted, automatically processed, and position results returned"
LINZ releases data in alignment with the New Zealand Open Access and Licensing Framework (NZGOAL)


Open Government Case Study: PositioNZ GNSS Data

http://ict.k.ch/content/bundesarchiv-lanciert-open-government-data-portal

FIG Working Week
Christchurch New Zealand
2–6 May 2016
Recovery from a natural disaster