Future Development of the New Zealand GNSS Continuously Operating System (PositioNZ)

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Current LINZ PositioNZ network

| Primary Objective - Deformation/Datum Monitoring |
| Secondary Objective - Provision of real-time GNSS data |

Current Situation
31 sites in NZ, 2 on Chatham Islands and 3 in Antarctica
1hr & 24hr 30sec RINEX files (accessed via website)
13 Sites streaming 1” data (public access via Ntrip)
Developing PositioNZ-PP
Existing LINZ, GeoNet and other sites

- **120+ NZ sites**
  - LINZ - 31 sites at 100 km spacing
  - GeoNet - 71 sites at 30 km spacing
  - GNS - 10 sites
  - Other – 10+ selected city sites

Planned additional GeoNet sites by 2010

- **170 sites by 2010**
  - LINZ - 29 sites at 100 km spacing
  - GeoNet – 50 sites - 120 sites at 30 km spacing
  - GNS - 10 sites
  - Other – 10+ selected city sites
Research into real time network solution

11 PositioNZ and GeoNet stations used

Results:
- Configuration of stations has little effect on precision of results
- Density of PositioNZ stations (100km) is sufficient to obtain a network solution; however
- the sparser the network the greater the communication and operational problems

Looking forward

PositioNZ stations by themselves are at an insufficient density to provide a national reliable real time network

Need to expand the network by:
- Including GEONET stations
- Including other third party stations
- Installing additional stations in areas not covered by the above