

NZIS POSITIONING & MEASUREMENT STREAM

NZIS SNAP Webinar

The NZIS Positioning & Measurement Stream has developed a two-part webinar aimed at those interested in learning more about how to use LINZ's freely-available SNAP software. SNAP is widely used in New Zealand for geodetic and engineering surveys, and is currently the only software that uses New Zealand's deformation model to rigorously calculate NZGD2000 coordinates. It uses least squares to calculate coordinates and uncertainties, enabling rigorous testing against both relative and absolute accuracy standards. It can consume all common survey data types, including GNSS, levelling and traverse data. Both webinars will use practical demonstrations of the software to illustrate the concepts.

Introduction to SNAP Part 1, by Chris Pearson (Otago University), Thursday 12th October (1.00pm to 2.30pm)

This first webinar will start at the beginning for those who have either not have used SNAP before, or who may need a refresher.

- Least squares statistics (standardised residuals, error ellipses, standard error of unit weight etc).
- SNAP files (command, coordinate and data files).
- Minimally constrained adjustments, determining error factors, constrained adjustments.
- Running and reviewing an adjustment.
- Adding geoid heights.
- Using SNAPPLOT for visualisation and analysis.
- Example using GNSS baseline and terrestrial data.
- Register at: https://www.surveyors.org.nz/Event?Action=View&Event_id=348.

Introduction to SNAP Part 2, by Nic Donnelly (LINZ), Thursday 26th October (1.00pm to 2.30pm)

This second webinar will focus on some more advanced analysis techniques involving multiple data types and datums (e.g. NZGD2000 and NZVD2016). It will also introduce the user-definable SNAP csv format. This webinar will suit those who have attended the first webinar, or who are already using SNAP in their business and are interested in extending their knowledge of the software.

- SNAP csv file formats.
- Classifying observations and coordinates.
- Auxiliary parameters (bearing swings, scale errors and reference frame transformations).
- Applying commands to subsets of data (e.g. spatial selection, date selection).
- Testing against accuracy standards.
- Example using multiple data types (GNSS, levelling, horizontal angles, ellipsoidal distances etc).
- Example suitable for meeting NZIS Professional Entrance requirements.
- Register at: https://www.surveyors.org.nz/Event?Action=View&Event_id=349.

Membership survey

We want feedback from stream members about our performance to date and our collective requirements for the stream going forward. To do this we will circulate a brief Survey Monkey questionnaire to all of our members. Watch out for it in your email mailboxes in September/October, and please take a few minutes to respond with your valuable feedback and suggestions. For anybody wanting to become more active in the stream, the survey will include an opportunity to volunteer yourself for greater involvement.

Network RTK reference/discussion paper

The stream recently published a comprehensive document covering all aspects of Network RTK technology. Download a copy from: www.surveyors.org.nz/Article?Action=View&Article_id=65.