**Pacific Height Datum Workshop**

**Purpose**

To provide an interactive workshop for in which discussions of height datums and practical height survey issues or problems can be discussed.

**Agenda**

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| Time | Speaker | Topic |
| 9:30 am – 10:30 am | John Dawson (GA) | **Overview**   * Why an accurate height datum is important |
| Morning Tea | | |
| 11 am – 12 pm | Nicholas Brown (GA) | **Heighting Fundamentals and Ellipsoidal Height System**   * Overview of ellipsoidal (geometric) and physical height systems * Computing ellipsoidal heights * Adjusting ellipsoidal height data * Reference systems for vertical heights (ITRF, WGS84, local datum) * Combining height data captured using geometric techniques like GNSS and physical heighting using total station or levelling instruments * Transforming data between vertical reference systems * Deflections of the vertical, * Software used for implementation |
| 12 pm – 1 pm | Jens Kruger (SPC) | **Bathymetry**   * Overview of bathymetry * How heights are computed offshore * Transferring heighting information to ocean floor * Linking onshore and offshore vertical reference systems |
| Lunch | | |
| 2 pm – 3 pm | Matt Amos | **The Geoid and Geoid Models**   * Overview of the gravity field, geoid and geoid models * Overview of global gravity models (and their uncertainty) * How to compute geoid to ellipsoid separation * Using online geoid model calculators * Explanation of the different types of geoid models (gravimetric, combined gravimetric and geometric) * Case study of how NZ use a gravity model as a height datum |
| Afternoon Tea | | |
| 3:30 pm – 4:30 pm | Rob Sarib (convenor) | **Options for discussion topics on future work**   * Discuss the heighting requirements of Pacific Island nations * Discuss data available for the development of geoid models in the Pacific. * Discuss the need for a common VRS * Determining the relationship / difference between the various VRSs at discrete points (e.g. GNSS CORS, tide gauges etc.) * Verification of the of the geoid height / separation models * Creation of a digital terrain model based a chosen VRS as datum * Geoid height / separation model for onshore and offshore / maritime use * Geodetic data management and information system – development and maintenance * Issues and challenges with the development of a geoid height / separation model * Implementation of a geoid height or separation model * Communication and change management to users and software vendors * Education to the geospatial / surveying industry and also non- traditional community * Access to the tools / utilities * Technical and administrative support / advice to the users and software vendors |