**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
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| 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
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| 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
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| 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
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| 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
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