

Progress Towards a New Geodetic Datum for Australia

ICSM Permanent Committee on Geodesy

Nic Donnelly, John Dawson, Gavin Evans, Roger Fraser, Joel Haasdyk, Matt Higgins, Linda Morgan, Chris Rizos, Rob Sarib, Scott Strong and Steve Turner

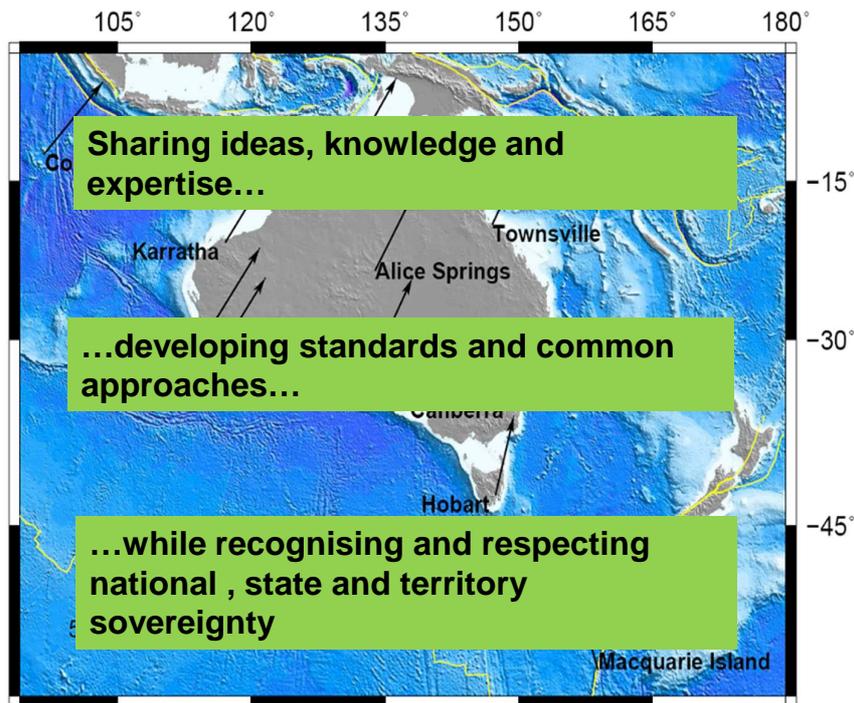


Outline

- Permanent Committee on Geodesy
- Drivers for a new datum
- Foundations of a modernised geodetic datum
- Progress towards datum modernisation
 - Standards development
 - GeodesyML
 - Infrastructure development
 - Coordinate and uncertainty generation
- Path to a modernised datum for Australia



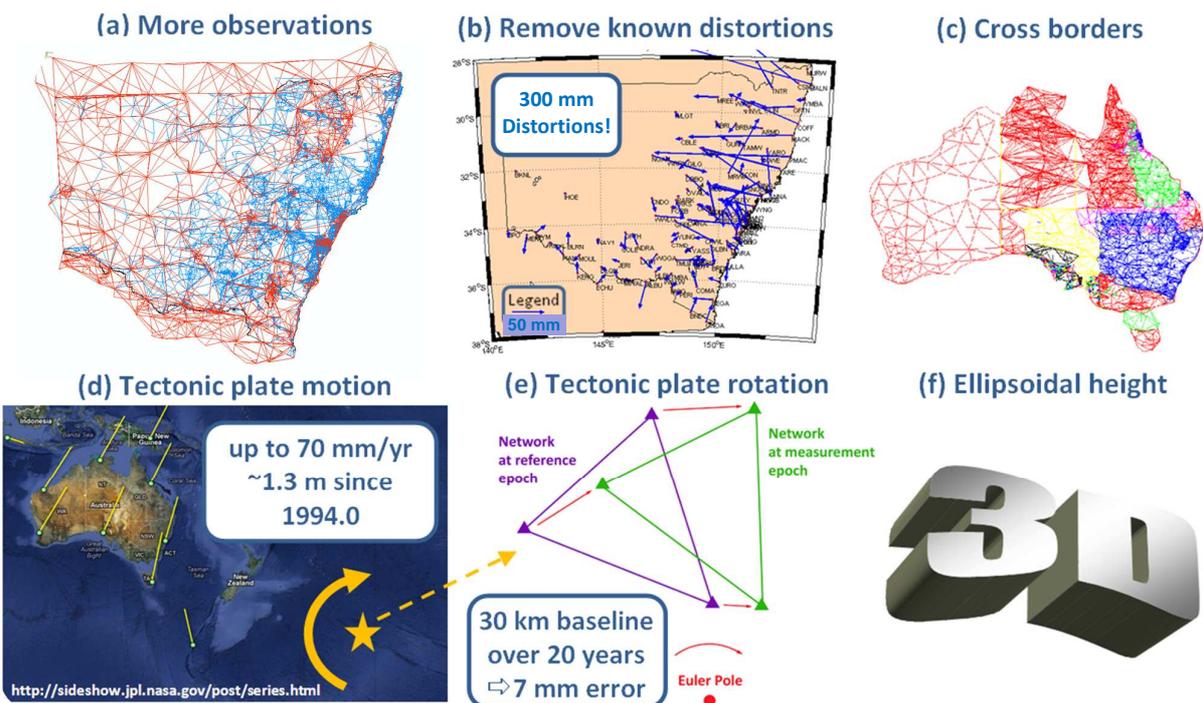
Australia / New Zealand Permanent Committee on Geodesy



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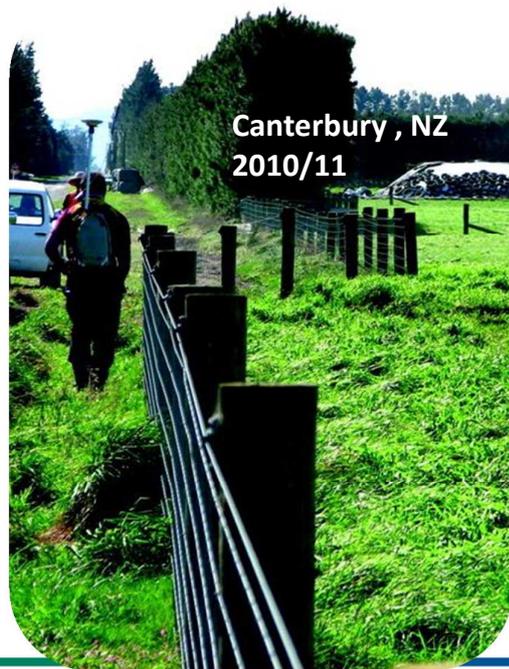
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Drivers for datum modernisation (1)... current datum is not good enough



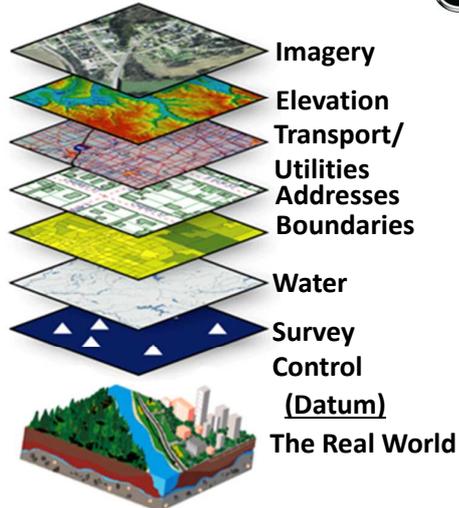
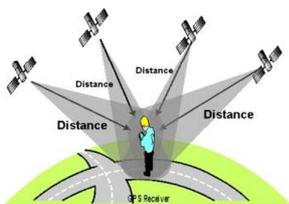
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Drivers for datum modernisation (2)... deformation demands datum maintenance



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Drivers for datum modernisation (3) demand for high quality spatial data is insatiable



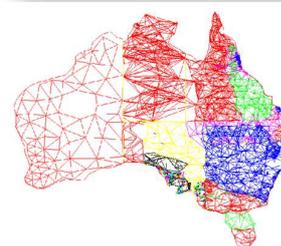
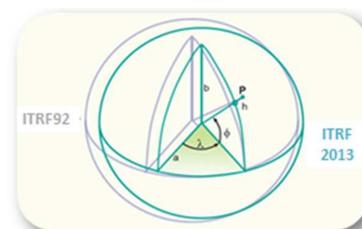
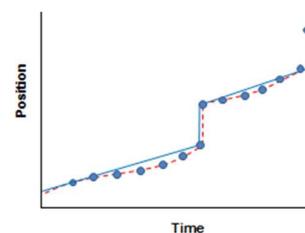
*Real-time precise positioning has become easy(er)
... the datum must respond to changes in technology*



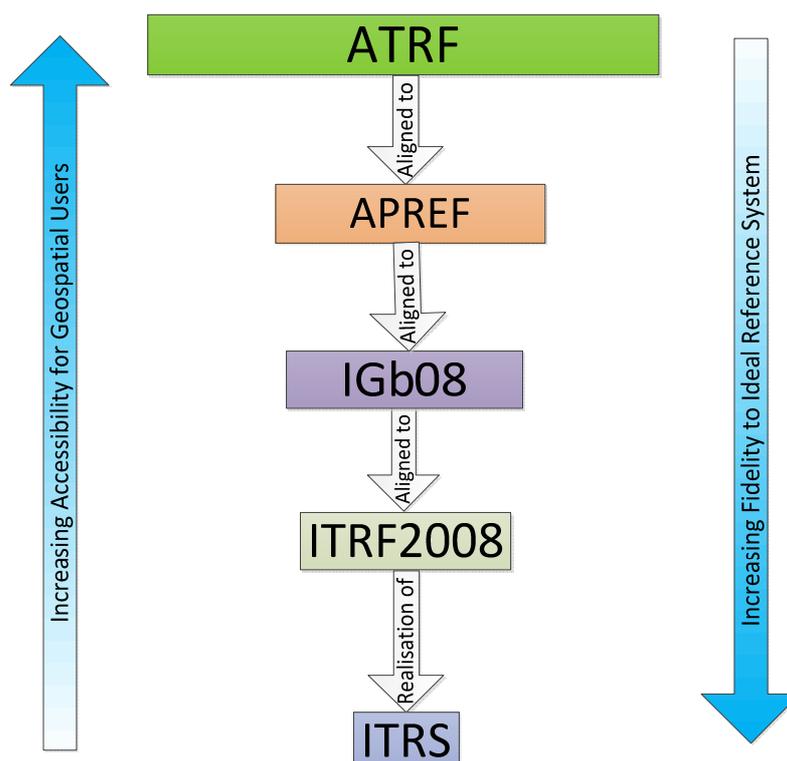
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Characteristics of a modernised datum – the Australian Terrestrial Reference Frame (ATRF)

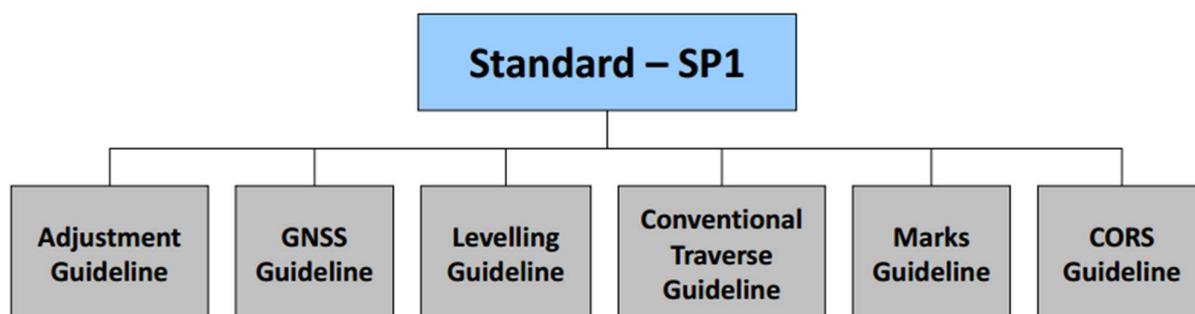
- A dynamic datum, featuring coordinate, uncertainty and velocity estimates at all marks – An accurate datum for any epoch
- Align to the latest version of ITRF – Consistency with global positioning technologies using global geodetic reference frames
- Feature a rigorous, nationwide adjustment of all geodetic data – Consistency throughout Australia, minimising local network distortions



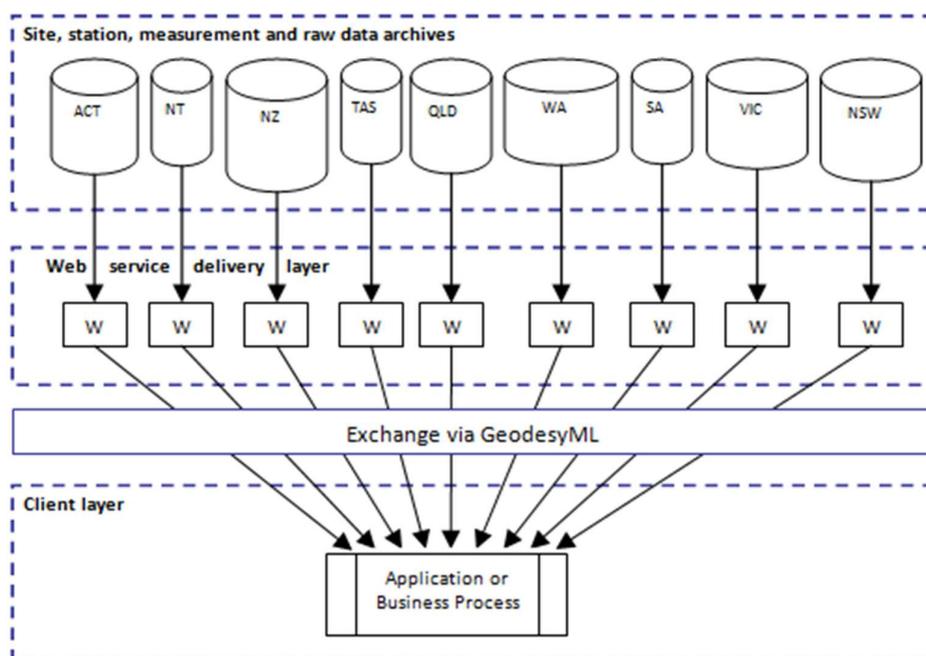
Foundations of a modernised geodetic datum



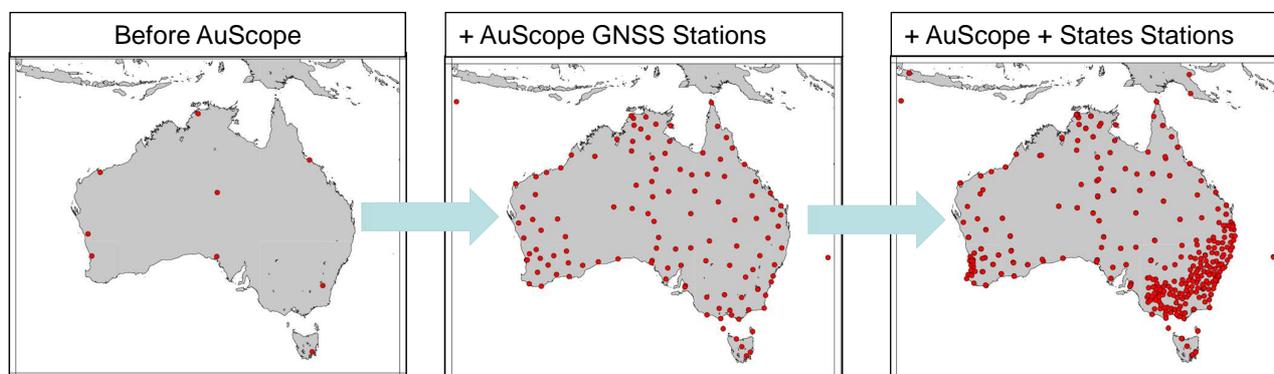
Progress towards datum modernisation (1)... standards development



Progress towards datum modernisation (2)... GeodesyML



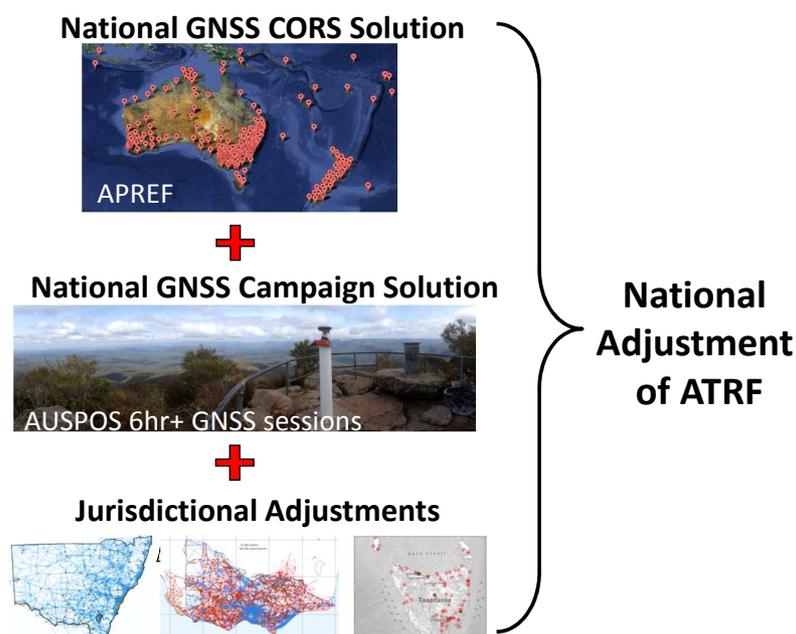
Progress towards datum modernisation (3)... infrastructure development



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Progress towards datum modernisation (4)... coordinate and uncertainty generation



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Path to a modernised geodetic datum for Australia

