A unified approach to Australia's positioning infrastructure

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SUMMARY

The International GNSS Service (IGS) is a voluntary federation of government agencies and research institutions working together to provide free and open access to the highest possible quality GNSS products and services. These are used to enable a better understanding of the Earth and support applications that provide benefit to science and society. At the foundation of all IGS products and services is the ground station tracking network – a globally distributed network of over 500 continuously operating reference stations. The core activities focused on within the IGS community are the delivery of – and enabling access to – the global reference frame, and the provision of clock, orbit and atmospheric models to support precise positioning applications, alongside the definition and sharing of GNSS related standards and conventions. As outlined in the IGS 2021+ Strategic Plan, there are ongoing advocacy and engagement activities to explore how the IGS products and services are being applied to applications that benefit society, such as climate and natural hazards monitoring and land administration. In doing this the IGS explores both the expanding role of GNSS in “value added” application, in addition to supporting sustainable and resilient GNSS for positioning, navigation, and timing. The Pacific is a region that is especially vulnerable to the effects of climate change, extreme weather events, and natural disasters; as such, geospatial information and services, such as those supported by the IGS, provide critical foundations that contribute to the security and well-being of the Pacific people. This paper presents three case studies on how the IGS products and services are being used across the Pacific to build the capacity of regional surveyors; adapt to a changing climate; and become better informed on natural disasters.
