



2020 Vision (Hindsight, Backsight, Foresight): APAS Webinar Series 2020

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The Association of Public Authority Surveyors NSW (APAS) was formed in 1994 primarily to cater for the needs of surveying and spatial information professionals working within state and local government and the education sector. Nevertheless, private surveyors also benefit immensely from APAS events such as conferences and seminars, which form an important part of the annual professional development events calendar.

APAS prides itself on organising an annual conference that is highly informative, focused on practical outcomes relevant to the surveying and spatial information community and provides ample opportunity for interaction with colleagues and exhibitors showcasing their newest technology.

The APAS2020 conference was to be held in Leura on 23-25 March 2020 but had to be cancelled at the last minute due to social distancing measures introduced to combat the coronavirus/COVID-19 pandemic. In order to allow APAS to still provide a professional development event for those that had registered for the APAS2020 conference, it was decided to organise the APAS Webinar Series 2020 at short notice.

The theme was “2020 Vision: Hindsight, Backsight, Foresight”, focussing on datum modernisation, the adoption of GDA2020, cadastral surveying, complex surveying tasks and how modern technology can be used to our advantage. As we enter a new decade, the surveying and spatial information profession is evolving to deliver and utilise an ever-increasing amount of digital data.

The APAS Webinar Series 2020 took place from 5 May to 30 June and was hosted by the University of Southern Queensland (USQ). It consisted of 16 pre-recorded presentations (and questionnaires for those requiring CPD points), most of which included a full paper. The event attracted 160 delegates, with 49% from private industry.



Figure 1: APAS Webinar Series 2020.

In the first webinar, Dr Volker Janssen (DCS Spatial Services) outlined how AUSPOS and CORSnet-NSW are used to support datum modernisation and to maintain and extend the NSW Survey Control Network. He showed that AUSPOS routinely delivers Positional Uncertainty (PU) at the 0.02-0.03 m level for the horizontal component and about 0.05-0.06 m for ellipsoidal height, as well as providing AHD heights at the 0.08 m level. The AHD-PU reported by AUSPOS appears to be overly conservative at around 0.18 m, due to the conservative AUSGeoid2020 uncertainty grid applied.

Joel Haasydk (DCS Spatial Services) provided a hindsight review of what has been accomplished for the roll-out of GDA2020 across a range of spatial data platforms and legislative amendments supported by the Office of the Surveyor-General, and what this means for practices in NSW. In foresight, this year also ushers in the Australian Terrestrial Reference Frame (ATRF) to support time-dependent coordination, and the Australian Vertical Working

Surface (AVWS) to support wide-area height requirements.

Over three webinars, Simon Hine (DCS Spatial Services) discussed the legislation changes to adopt GDA2020 and how they apply to surveys and survey plans under the Surveying and Spatial Information Regulation 2017. Included were examples of how to use uncertainties and approved schedule changes, the new general exemption policy 2020-94 and use of the new ‘GridCalc (GDA2020) for NSW’ spreadsheet. For this contribution, Simon later received the Keith Haddon Memorial Prize for the best webinar series paper.

This was followed by Michelle Blicavs (Association of Consulting Surveyors) presenting the current ‘state of surveying’ from across NSW. This included investigation of hourly rates, staffing challenges, business opportunities and what is on the horizon for consulting surveying firms. The Surveying Taskforce and the Excellence in Surveying and Spatial Information (EISSI) Awards continue to be crucial to the future of surveying.

Dr Craig Roberts (UNSW) explained what a teaching academic does at university. This new education-focused role opens the way for potential new staff members from an industry background who may want to contemplate a career change or consider a fractional position to teach the next generation of surveyors.

Fred de Belin (City of Ryde) explored the ‘skeletons’ in Shrimpton’s Creek. He delved into fascinating cadastral questions raised from sifting through land titles and Deposited Plans during the determination of ownership of the creek bed along its 5-kilometre long course.

Geoff Songberg (formerly Crown Lands) investigated riparian boundary determinations, which are theoretically governed by common or case law and the legislation that contains the definitions for these boundaries. Comparing law and legislation to the practice of surveyors and related practitioners, he



Figure 2: Simon Hine received the Keith Haddon Memorial Prize for the best APAS Webinar Series 2020 paper.

showed that the two are generally not the same. It is clear that things need to change in order to equate legislation and practice, so that boundaries by agreement are reverted back to true riparian boundaries.

Fred de Belin (City of Ryde) returned to answer some of the interesting and fascinating questions raised from going through the chain of titles and subsequent subdivisional Deposited Plans along Martin’s Creek. He described in detail some of the anomalies and strange happenings uncovered during this investigation into the possibility of Possessory Title action.

Michael Spiteri (Public Works) asked whether there is a future for the survey peg. He investigated current marking requirements, considering their deficiencies and strengths, compared current standards to our past and to other jurisdictions within Australia and overseas, and formulated some ideas for the profession to consider as we head into the future.

John McNaughton AM (Palmer Bruyn Surveyors) discussed the practical use of legislation and common law practice for surveyors, using case studies in which the surveyor saved the client significant financial and personal cost. He also commented on methods to decipher handwritten descriptions contained within conveyances, which are the basis of many Limited Titles.

Next, Steven Garlinge (Geodata KODA Australia) outlined how 3D positioning systems for underground construction robots

can be optimised to provide significant enhancement to multiple workflows where large, specialist machinery performs drilling and installation work over a large scale to high-accuracy requirements. He presented how the ROBY and Paneller machines are used in the construction of the NorthConnex tunnels.

Peter Sergeant and Matt Richardson (Monteath & Powys) reported on the work undertaken as survey managers on the Newcastle Light Rail Project. This included establishing a high-accuracy survey control network, managing Preservation of Survey Infrastructure (POSI) requirements, overseeing construction quality control and conformance, carrying out construction surveying for the tram stops and maintenance depot as well as weekly aerial photography using a commercial helicopter.

Adrian White (DCS Spatial Services) provided a review into the use of digital survey plans in NSW to understand why reforms to date have not been successful and how uptake can be accelerated. 95% of mainstream conveyancing dealings are now lodged electronically, and LandXML files for over 500,000 registered Deposited Plans have been captured. However, in spite of the benefits of going digital, the surveying profession continues to lodge only 5% of plans using LandXML.

Last but by no means least, Michelle Blicavs (Association of Consulting Surveyors) returned to present tips on how

to be productive when working from home under lockdown conditions. She was able to implement new processes and disciplines for herself and her team, providing a renewed focus on how to start each day fresh, not be lost in isolation and find new energy for a more productive period even during the pandemic.

APAS would like to thank USQ for hosting the APAS Webinar Series 2020 at short notice (special thanks to Jessica Smith, Lecturer in the School of Civil Engineering and Surveying) and all presenters for their time and effort in contributing to this event during these challenging times. The proceedings of the APAS Webinar Series 2020 are available online from the APAS website (<https://www.apas.org.au/>).

At the Annual General Meeting, held online in May, the following APAS office bearers were elected for 2020/21: Jarad Cannings (President & ISNSW Representative), Nigel Petersen (Vice President), Michael Armstrong (Secretary & Public Officer), Michael Waud (Treasurer), Thomas Grinter (Past President), Dr Volker Janssen (Publications Officer), Peter Nilon (Conference Manager), and Committee Members Wayne Fenwick and Micheal Kocoski.

Let’s all work together, support one another and do our part to overcome the coronavirus/COVID-19 pandemic. Hopefully we’ll be able to enjoy each other’s company again, without any restrictions, at the next APAS conference.

APAS2021

APAS2021 will be held in Leura on 22-24 March 2021.

Please consider contributing to next year’s conference by presenting a paper. There is a lot of fantastic work being done out there – why not tell the profession about it?

For more information and to indicate interest in presenting at APAS2021, please contact the APAS Publications Officer, Dr Volker Janssen (Publications@apas.org.au).