



Cruising Sydney Harbour, Australia's first kit home plus a report on the exotic experience of the FIG Working Week in Morocco, have all attracted our columnist's eye.

From Sydney Harbour to Marrakech

History House in Sydney is the HQ for the Royal Australian Historical Society as well as the venue for a lecture on the recent book by Lyn Fergusson about New South Wales first Governor, Arthur Phillip. The enigmatic founder of Australia is finally becoming more well known through the dedication of historians like Lyn. Meanwhile, a cruise of the inner Sydney Harbour suburban coastline in the steam tug *Waratah* was magical even though the weather was dark.

Bowral historic houses

This year's selection of historic houses open for inspection to National Trust members were quite irresistible to a surveyor. Wingecarribee is the first kit home reassembled in Australia dating to 1847 and re-erected by the son of the third Surveyor-General of NSW, John William Molesworth Oxley whose name was also John. This superbly maintained residence has been restored by the descendants of the original owners, Bill and Marcia Yates. This most gracious lady proudly took Kerima-Gae and I through some hidden aspects of the homestead including the travelling medicine case of the S-G himself, which was still in perfect order nearly 200 years later. There were estate plans of later subdivisions on the walls of the billiard room with a plaque displaying that the grandson of the S-G (once again John!) was a licensed surveyor in the late 1800s.

When Brocky dreamt of Jeannie. . .

At a very recent celebrity visit by the cast of the famous comedy "I Dream Of Jeannie" I was very fortunate to be at the venue at the perfect time to get photos with **Larry Hagman** (Major Tony Nelson) and the still voluptuous **Barbara Eden** who played the quirky and delicious Jeannie the female genie. Barbara is alleged to be 76 years old!

FIG 2011 Marrakech

Attending the FIG Working Week in Morocco with 1700 other surveyors was a great occasion. With 96 of the 124 member countries represented it was a resounding rebuff to the cowardly terrorists who had bombed a restaurant in the host city of Marrakech only four weeks before.

Our Moroccan hosts staged a magnificent conference with all the special trimmings of such an exotic location. The Plenary sessions were topical and somewhat intriguing as you will see from viewing the proceedings on www.fig.net at the FIG website. It was most encouraging to see that five countries had submitted papers for presentation in the History

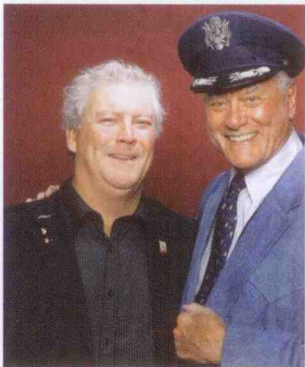
Session coming from Australia, Portugal, Poland, Spain and Colombia. Unfortunately the presenters from Spain and Colombia did not show up so there must have been reluctance from these countries to risk travel to what may have been perceived as a dangerous destination. Nevertheless, the three presentations made were most well received by the disappointing crowd of around 20-25 for the session.

I showed a graphic story about "The Surveyor-General and Registrar-General of Upper Egypt in the XVIIIth Dynasty of the New Kingdom – Rekhmire (c.1470-1420 BC)" along with surveying references from the Palermo Stone (c. 2350 BC) including the earliest appearances of surveying during the ancient Egyptian civilization cited during the First Dynasty (c. 3100 BC!) for the Stretching of the Cord Ceremony which referred to the divine setting out of the proposed temple by the Pharaoh and his scribe surveyor representing Seshat – the Goddess of the Surveyor Scribes. The "cord" was the sacred measuring rope utilised by the surveyors of antiquity to measure their distances.

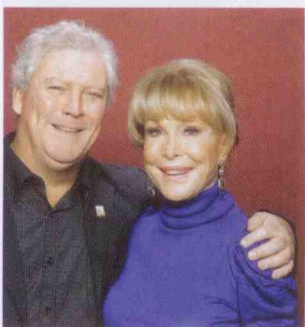
Our Portuguese presenter, **Paula Santos**, gave an intriguing insight into the intricacies of surveying the borders of her nation's African colony Mozambique while our Polish representative, **Marcin Uradzinski**, revealed the amazing surveying books from his land over four hundred years old. Full accounts of each of the history papers can be found on the FIG website.

The Welcome Reception was held in the Mansour Eddahbi Hotel which gave a very warm and safe introduction to the truly peaceful Marrakech with its most congenial hosts. At the FIG Foundation dinner the exceptional Moroccan Restaurant *Palais de Jbilats* saw us enjoying traditional music complete with the most alluring belly dancers accompanied by drummers and other musicians. Full lambs on platters were served for the main meal. A full house was treated to a great night's entertainment enhanced by the best of local cuisine at the Gala Banquet in *Le Pacha* Restaurant.

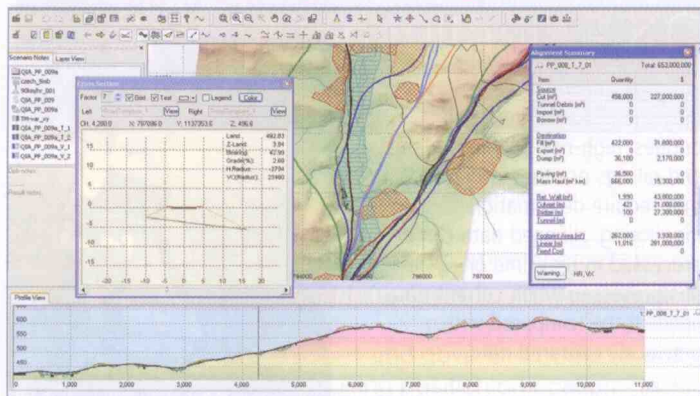
The Closing Ceremony was thrilled by the incredible DVD shown by the Italian delegation promoting the 2012 FIG Working Week in Rome next May. While the crowd was in such an exalted mood we were then extended the best of Italian hospitality at a Farewell Reception boasting the best of Italian fare and wine. All in all the FIG 2011 in Morocco was a magnificent success with the largest attendance of any similar event ever staged. To the Moroccan hosts may we applaud this absolute triumph and to our 2012 Italian hosts "Viva Italia!" – see you there next year.



Above: Is Larry Hagman (right) getting ready to land the first punch for Brocky's squeeze on Barbara Eden (below)?



Quantm road planning



Quantm Desktop Alignment Planning software has been designed to support road planners and engineers in identifying the best horizontal and vertical alignments for small road schemes such as bypasses. The technology generates millions of alternative alignments and returns a range of 5-20 best options for review. The Trimble software is available in two editions: Desktop Premium performs corridor identification and full horizontal and vertical alignment optimisation while Desktop offers vertical optimisation only. Korec is the UK and Irish distributor of Quantm software.

Feature recognition

French company, Viametris, has developed software to recognise and vectorise 3D features from point clouds via their product, MAGELAAN – Mapping, GEodesic data Localisation and Automatic Analysis. Their aim is to make better and cheaper use of mobile mapping data by speeding up the input of features into GIS. Their software can be trained to recognise shapes, such as bollards, phone boxes and lighting columns from point cloud data. From imagery combined with lidar the software can detect and use character recognition to analyse road signs and markings, including pedestrian crossings. MAGELAAN can also extract road edges and calculate geometry as well as sight lines and road camber. The company has a significant R+D capability that is available for development of new algorithms and prototyping.

Swinglet flies into action

Korec has recently become the UK and Irish distributor of Swiss company SenseFLY's unmanned flying camera. The swinglet CAM is a lightweight, unmanned airborne vehicle (UAV) with a high-resolution electronically integrated digital camera. Designed for small

scale aerial mapping projects, it can be deployed in under a minute, is hand launched and has a take-off weight of 500g. The camera records 10-40 cm/pixel images and can produce over 100 hectares of aerial photo coverage during its 30-minute flight. An integrated GPS-based miniature autopilot ensures that the camera starts, flies and lands silently on its own. Its flight path is defined in PC-based software and can be updated during the flight. *GW* is having a demo of this device and will report to readers in due course.

SmartAntenna plus

The Leica Zeno GG02 Plus is a centimetre accurate GNSS SmartAntenna combining dual-frequency GPS and optional Glonass support. The antenna

together with a Zeno field controller can deliver centimetre accuracy positioning in difficult environments like urban canyons and tree canopies. The Zeno GIS Rover integrates a dual-frequency GPS and Glonass SmartAntenna with cm accuracy, either in real-time or after post-processing. A rugged design ensures the unit is able to work in extreme temperatures. Other features are: an exchangeable all-day battery, two megapixel camera and in-built 3.5G modem. The company has also released the Zeno Connect app for third-party software applications to manage and configure the Zeno GNSS sensors (GS05, GS06 and GG02 plus) and receive NMEA messages. Plus, the Zeno Field v2.0 and Office v2.0 software are available.

Cable-free scanner

Leica's new ScanStation C5 laser scanner has been designed for as-built and engineering surveys as a fully integrated, cable-less system. It has an onboard interface with a high-resolution colour touchscreen and integrated high-resolution zoom video. The scanner also features a laser plummet and tribrach mount and interfaces to standard survey accessories such as TPS batteries, total station prisms and the Leica GPS SmartAntenna. Owners can add high-accuracy tilt compensation, internal digital camera access, higher scan speed and longer range via simple upgrades. The scanner is also fully compatible with Leica's Cyclone software.

Software standards

Trimble RealWorks version 7.0 software incorporates the newly approved ASTM International (formerly the American Society for

Testing and Materials) E57 E2807 data exchange standard for 3D imaging systems. The software allows 3D laser-scanning users to use their design software of choice, depending on their applications and workflow. RealWorks is a stand-alone software suite for the interpretation and 3D rendering of scanned point cloud data.

Long-range radio

The TDL 450H radio is a long-range edition of Trimble's radio modem series designed to support GNSS surveying applications. With 2-35 Watts (user programmable) of power, the radio transceiver's range enables work in difficult terrain and urban areas and a multi-function user interface streamlines field configuration and troubleshooting. The radio modem allows users to adapt to conditions: for longer baselines, surveyors can dial up the power and, when the work area is smaller, a lower power output can extend battery life. The TDL 450 series is available in two frequency bands to cover the entire commercial UHF band and it also allows the user to select from either 12.5 or 25 kHz channel bandwidth. The modem comes with a new protocol offering 9600 bps in a 12.5 kHz channel without loss of range.

Added support in eGIS

The latest version of eGIS running on Topcon's GRS-1 and FC-236 handheld GNSS field controllers offers support for real-time volume calculation. A user can measure the boundary of an area at the top and bottom and assign them to the volume calculation tool to get results within seconds. The function can benefit those



Measure in one

With the Leica 3D Disto laser distance meter, location, height and distance can be measured in XYZ from one location, in one measurement. A combination of distance and angle measurements determines the position of each point, targeted with the integrated camera and captured with the laser beam. Data is captured and stored and can be post-processed. The sensor can be placed on any stable surface or mounted on a tripod. The Disto is controlled by a remote control hand-held unit and features an intuitive user interface with "wizards" to assist with complex measuring tasks.