

"Fore-Sight"



Quarterly Newsletter of the Association of Surveyors of P.N.G.

"FROM MASTA MAK TO SPATIAL DATA PROFESSIONAL" ... theme for ASPNG 2001 Survey Congress

"From Masta Mak to Spatial Data Professional" is the theme announced by Congress Manager, Mr. Michael Larmer for the upcoming Survey Congress to be held in Port Moresby this July.

After lengthy deliberations, the ASPNG Council were unable to identify a suitable entry from the previously advertised "Cash Prize Contest".

While few entries were received, Council wishes to thank Dickson Tauna and Bob Curley for their many contributions that were both varied and interesting.

The publication of the book **"Masta Mak"** (a definitive history on surveying in Papua New Guinea and ASPNG's Centenary Project) is on schedule to be launched in conjunction with this year's Survey Congress.

The chosen theme reflects not only the historical importance of the occasion but also the move towards the increase and acceptability of the newer technology surveying and mapping applications.

A number of overseas guests have already accepted invitations to attend this year's Survey Congress.

Michael Larmer is confident of yet another success with the organisation of this big event but is looking for a varying array of papers to be presented by our PNG surveying fraternity (see **"Call for Papers"** - p.4).

Present indications by Council and the Congress

Manager are that the Congress will be held at the Islander Travelodge in Port Moresby between July 12th and July 14th (that's Thursday to Saturday).

The official launch of the book **"Masta Mak"** will be held in conjunction with the President's Welcoming Cocktail party. Press, TV, and a host of official guests will honour this occasion that is a substantial 'benchmark' for the Association.

Fred Pratt, sponsor of **"Masta Mak"** is looking forward to the occasion with some relief—this book has taken a phenomenal amount of time and research to produce not forgetting a substantial financial input. All surveyors, past and present are indebted to Fred Pratt for this magnificent contribution to the profession.

"Masta Mak" author, James Sinclair is ready to embark on yet another narrative on PNG history with the story of the Papua Club about to be told.

Pre-release copies of the book **"Masta Mak"** will be sold at this year's Mining Conference to be held at the Islander Travelodge on June 22 to 24.

ASPNG M'ship Fees Now Due

Council wishes to remind members of the ASPNG that membership fees for year 2001 are due on the 31st of March—Corporate Membership fee is K125.00 and Associate Members K90.00. Council is appealing to all members to encourage fellow surveyors who are not members to join in.

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COMING EVENTS :

March : PNGIC Annual General Meeting
June 22 to 24 : Mining Conference

July 12 to 14 : ASPNG Survey Congress

INSIDE THIS ISSUE :

Feature Story : *"The Green Beast"* 2

GIS Seminar A Success 2

"Ptolemy's Mis-Close" 3

GIS Users Group Re-established in Port Moresby 3

Surveyors CPD Quiz 3

Members & Other News 4

Call for Papers : PNG Survey Congress, July 2001 4

Editorial Comment 4

In Other News from Council ...

Surveyors Board Registration Fees : All surveyors registered with the Surveyor's Board are reminded that these fees are due on the 30th June 2001. ASPNG Fees and Surveyor's Board fees are two different fees that need to be paid.

Sun Obs Program (Year 2000 Compliant)

ASPNG has for sale copies of a Sun Obs Program developed by Norm Leet for K200.00 each.

Survey Congress : Twenty five rooms have been reserved in the Garden Wing of the Islander Travelodge at K240 single K120 per person twin share. The Park Royal also has rooms available at K275 for a standard room.

Food For Thought : It has been reported that the ANU Crustal Motion Survey of Rabaul done before and after the recent earthquake found a PSM moved 1.0 metre relative to another neighbouring PSM.

Feature Story : "The Green Beast" Courtesy of Arman Larmer Surveys



*The above photo could almost be a scene from World War 2 but is in fact "The Green Beast" stripped and ready to be transported by air to yet another remote survey location somewhere in PNG.

The Green Beast is a 1963 short wheel base Toyota Landcruiser (often referred to as a "Noddy Wagon" by those in the know) and this particular unit has seen 'active service' with Arman Larmer Surveys since early 1964. Ordered from Ela Motors in 1963 and originally purchased for \$1000, this vehicle has delivered exceptional value for money over its many years as a 'bush-bashing', go anywhere, all terrain monster—a beast in fact—a Green Beast.

In one of its first efforts, The Green Beast crawled its way up the Kassam Pass, and this while Dillingham's were carrying out construction. That first climb took three days to negotiate. The three speed gearbox working hard to drive the Continental Lugg tyres ensured that The Green Beast conquered all in its path. With an average speed of 6 mph and getting 6 mpg this was tough going.

Usually under the guidance of Graeme Arman or Michael Larmer, The Green Beast journeyed throughout the Highlands visiting such locations as Lufa, Nambayufa and Asaro in the Eastern Highlands, Chuave and Kundiawa in Simbu Province, Minj, Banz and Mt Hagen in Western province, and through the Jimi Valley to Kompiam, Wapenamanda and Wabag in Enga, then on to Ialibu and Mendi in the Southern Highlands.

While this was all part of a day's survey work, not all was without incident ... numerous biffs and bashes and a few rollovers or two added to the legend of The Green Beast. Whether grinding through landslips and mud slides or negotiating raging creek crossings, The Green Beast rolled on under heavy loads—often towing a trailer full of camp supplies and survey gear as well as its crew of intrepid surveyors and chainmen.

Reliability and relatively little maintenance became a trademark of this legend.

Down on the coast, The Green Beast operated far afield often breaking ground where no roads and bridges existed. East of Port Moresby to Rigo and Marshall Lagoon, north to Sapphire Creek and the ranges beyond Goldie Barracks, and west to Galley Reach, Mekeo, Kerema, Morehead and Daru.

Slung under choppers (and once dropped in the surf near the mouth of the Lakekamu River), transported in *bel bilong balus*, carried as deck cargo on coastal vessels or rafted down rivers The Green Beast would find its way to a remote survey location where it would star as the prime mode of transportation.

Graeme Arman has been quoted as saying that 'those taking part in these operations really enjoyed cruising along with a vehicle that had no roof, doors or bonnet, with a thought that this was normal'.

Graeme Arman and Michael Larmer together with many staff attribute a lot of their success to the invaluable role The Green Beast played through nearly 40 years of company survey operations in PNG.

At long last when it became time to call it a day, The Green Beast was treated to a new coat of paint and lovingly restored. It now takes pride of place in the Arman Larmer historic collection in Port Moresby. As part of an honour ceremony, The Green Beast was donated to the National Museum and Art Gallery—a worthy tribute to a mighty machine.



GIS Seminar a Success

January 30, Port Moresby : A GIS seminar jointly conducted by the NMB, the Dept of Agriculture, the National Forest Authority and the ACLMP was held at the Islander Travelodge to display the latest range of GIS databases and digital mapping products. Topics for discussion included a look at potential developments and planning future directions.

John McAlpine gave an entertaining and informative opening address while the technical presentations were ably hosted by the Director of Mapping, Mr. Omani Rei.

Highlights included the following database presentations :

- PNG Resource Inventory System (PNGRIS)
- FIM (Forest Inventory Management)
- BioRap (Biodiversity Assessment and Planning)
- Land and Geographic Information System (LAGIS)

A comprehensive presentation was made on the control, development and production of the NMB's Village Mapping Project and subsequent topographic outputs that are available in digital form. A proposed new integrated MapInfo / Access front end interface was greeted with much interest.

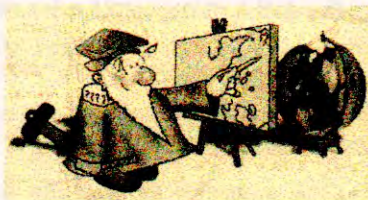
Sadly, we will shortly farewell David Freyne and his ACLMP AusAid Team.

"PTOLEMY'S MISCLOSE"

Article derived from a paper in "Cartography" Vol 29, No. 1

Our cartoon friend is Ptolemy, and he's been adopted by MicroImages the makers of TNTmips to illustrate the epitome of technical excellence. Ptolemy represented the peak of Ancient Greek cartographic achievements.

Amongst other things, in the 2nd century AD, he drew a map of the world. Using the mathematically helpful plan devised by Hipparchus, he laid out his world map on a grid of latitudes and longitudes that divided the globe into 360 degrees. This part of Ptolemy's contribution to surveying and mapping was reliable and impressive. It is still used today.



Where he went wrong was in choosing the area to be covered by the grid. He had a choice. Two different calculations about the size of the Earth existed at the time. Eratosthenes, in the 3rd century BC, with some accuracy had calculated its circumference as 25,000 miles. The actual figure is close to 24,900 miles depending where the circumference is measured, for being an oblate spheroid the circumference is larger at the Equator than it is from Pole to Pole. Eratosthenes calculations meant that the distance between lines of longitude on the Equator

measured some 60 miles. One minute on the grid at the Equator therefore equalled approximately one mile.

Later on, in the 1st century BC, Poseidonius, using unreliable stellar observations, wrongly calculated the circumference to be 18,000 miles. The distance between his lines of longitude on the grid represent much smaller miles. That in part is why Columbus miscalculated distances when he crossed the Atlantic. His equatorial distance was too short.

This happened because Ptolemy, without checking the calculations available, accepted the more recent figure provided by Poseidonius. His map is near a quarter too small, showing the Eurasian continent too large.

This mistake, which confused explorers and Globe makers, was not rectified until it dawned on Europeans that Columbus and his followers in fact had not found a new way to the old world in Asia, but a barrier to this formed by a "new world" unknown to Greek geographers, their intellectual ancestors, and to Christian Patriarchs and prophets who believed that Jerusalem lay at the centre of the world, which is almost the case with Ptolemy based maps. That "new world" is today known as the American continent and that is why the islands discovered by Columbus had to be re-named the West Indies to differentiate them from the proper ones.

GIS Users Group Re-established in Port Moresby

Thanks to the National Mapping Bureau providing a suitable venue, the GIS Users Group was re-established in Port Moresby during October last year - this was after a break of nearly 2 years, the last meeting being on 20th November 1998. Meetings are now being held on a regular basis.

Representation by a broad cross section of industry, government agencies, education and other institutions—including the ASPNG indicate that the GIS Users Group may now be a forceful voice with which to direct the co-ordination and direction of GIS in Papua New Guinea.

With reference to the guidelines established at the National GIS Workshop in March 1998, the current GIS Users Group is actively pursuing a program for improvement through working sub-committees. Rod Gould of Asia Pacific Surveys, John Quigley—National Mapping Bureau, Paul Guymer—National Dept of Health, and Michael Sirabis of

the Dept of Works formed the first working sub-committee. The following points have been identified as priority areas:

- Urgent need to standardise GIS formats
- Integration of existing data sets
- Record existing data sets (Meta-data bank)
- Provision of advice and guidelines to consultants
- Set a direction for GIS in PNG
- Develop a "One Stop Shop" to facilitate the above
- Adopt the recommendations of the PNG National GIS and Spatial Data & Systems Workshop
- Review and implement the workshop recommendations and strategies

Obviously there needs to be a lot of effort to achieve the above ideals and funding needs to be sourced as well.

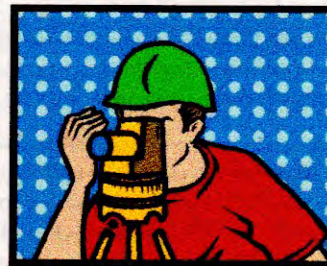
Surveyors CPD Quiz

So you thought the last question was too easy (???) - some research may be required with this one ...

In the United States of America, most tracts of land in the original 13 states were surveyed by a system using :

- A. Military Grids
- B. Metes & Bounds
- C. Plane Co-ordinates
- D. Principal Meridians and Baselines

Question in Vol 1 Issue 1 : Answer D was the correct answer



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Members & Other News

Unfortunately due to lack of suggestions "Fore-Sight" looks like remaining the name of your Newsletter. But, we are still open to suggestions.

The **PNG Institute of Cartographers** is alive and well with a revitalised Working Committee that was confirmed as their Interim Council at a recent special meeting. An Annual General Meeting is planned for March this year. Membership details or enquiries about joining the **PNGIC** can be obtained by contacting Omani Rei at the NMB, Kini Lohia at Forestry or Raymond Bure c/- Placer PNG. The **PNGIC** recently distributed an industry questionnaire to evaluate the state of cartography in PNG and to develop new directions. Perhaps others can learn from the **PNGIC's** initiatives.

The initials "**SP**" have a special place in PNG and quite a few meanings—try these on ... **Skerry Palanga**, Surveyor's **Plumb-bob**, **Sepik Plains**, apart from the obvious—our favourite local brew, your mate down the corner betting shop, an expletive some labourers get called, and of course the whole region we're in. You can also Bank**SP** these days.

Surveyor Clive Bassett in a change of direction has recently been "**Spearheading**" a new communications company down in Western Province. Shareholders are required we're told for this Kiunga based operation.

CALL FOR PAPERS : ASPNG SURVEY CONGRESS, JULY 2001 "From MastaMak to Spatial Data Professional"

It is expected that the official launch of James Sinclair's book *MASTAMAK—The Land Surveyors of Papua New Guinea* will occur during the Congress so Papers touching on the history of Surveying in PNG and elsewhere would be most welcome. Of course we also encourage papers dealing with the future as well, hence the second part of the theme.

A brief summary of the paper should be submitted by February 28, 2001—electronically if convenient to alsurvey@daltron.com.pg or faxed to (675) 325 8813, Attention : The Congress Manager.

Please include the following information—Presenter's name, address, fax, phone and e-mail address; Title of the Presentation; Type of Presentation (paper, oral presentation, poster, workshop); Abstract (about 200 words). For further information contact Michael Larmer, The Congress Manager, P.O. Box 372, Port Moresby. Phone 325 83 22 or Fax 325 8813.



Editorial Comment : A Case for CPD in PNG

This second issue of "Fore-Sight" contains further reference on continuing professional development — "CPD". **The courses being offered by the University of Technology in Lae are to be highly recommended.** (Full details on these courses next issue).

While there are many formal courses available from various institutions, a degree of CPD can also be maintained by exploring other avenues. A subscription to a "trade journal" is one way of achieving this.

Many of these publications are free of charge. "**GEO Asia Pacific**" is one such publication that can put you at the cutting edge of technology in the fields of GIS and computerized drafting / cartography on a regular basis. The magazine is available—free of charge—from :

Geo Asia Pacific, 135 Middle Rd, # 02-21 Bylands Bldg., Singapore,

188975. Fax : +(65) 883-1027 or e-mail khashtings@mail.aip.com

Another way to pursue CPD is to explore your own computer. Most computers are supplied with a suite of programs for a variety of tasks as well as word processing. Preparation of this newsletter using *Microsoft Publisher* is an example of this. Creating graphics and inserting them in publications and reports is another example. The only cost to you in this instance—is time. And that time is a worthwhile investment.

CPD does not have to be expensive but even if you do have to spend some money occasionally, as well as time, it will be a rewarding experience.

- Ed.