

"Fore-Sight"



"Fore-Sight"-Quarterly Newsletter of the Association of Surveyors of P.N.G.

ASPNG Website Progresses

Hon. Sec. Dickson Taunagita has been hard at work designing and developing the web site for the Association of Surveyors of Papua New Guinea.

At this time six pages are under development and these will have links to various matters or to advertisers, or subscribers to the ASPNG Web Site.

Page 1 : Is what the ASPNG is about

Page 2 : Advises who are the Council members and how to contact them

Page 3 : Lists ASPNG Members and categories

Page 4 : States the ASPNG Code of Ethics

Page 5 : Provides details of the ASPNG Newsletter

Page 6 : Gives Congress News (inset below)

Dickson is planning to get the web site up and running by next month, in time to give the 2002 PNG Survey Congress plenty of exposure. However, this will depend on members getting back to him with comments on the web pages, design aspects, other information for inclusion, etc. Copies of the web pages can be distributed electronically by e-mail, or if need be, you can collect a copy on floppy disk.

Now is the time to support Dickson and the other Council members with this initiative. After all, they are doing the hard work, only your comments are required (and maybe a vote of thanks for the good efforts put in to date).

Please contact Dickson on dtauna@aps.com.pg or <http://www.aps.com.pg>

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COMING EVENTS :

36th PNG Survey Congress, Lae
July 11th - 13th

REMINDER :

ASPNG Membership Fees Are Now Due, Invoices to be issued shortly.

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Council Endorses Increase to the ASPNG Scale of Fees

At meeting no. 236, ASPNG Council resolved to revise the Scale of Fees. Under a covering letter dated 11th February, the new Scale of Fees as presented is the recommended minimum charge rates for various categories of surveying services effective from February 2002.

Revision of the Scale of Fees is generally undertaken on an annual basis using a formula or adjustment in keeping with the Consumer Price Index (CPI). Occasionally other factors may need to be taken into consideration. It is interesting to note Council's recommendation under the heading of "POLICY" with regard to "Class of Clients" and "Invoicing / Payment Stages" - sound advice indeed in the current financial climate. Thank you Council.

Congress

THIRTY-SIXTH SURVEY CONGRESS
THE LAE INTERNATIONAL HOTEL
THU 11th - SAT 13th JULY 2002
SURVEYORS NEED FOR PROGRESS IN THE TWENTY-FIRST CENTURY

Call for Papers
The Association of Surveyors of Papua New Guinea want to invite papers from participants at this Congress. The papers should reflect the theme of the Congress and be relevant to the surveying disciplines of: Cadastral, Surveying, Mining, Petroleum, Hydrographic, Engineering, Education, GPS, Electronic and legal aspects relating to land in PNG.

Authors are requested to present an abstract (the paper should be 10 pages or less) and a short summary of the paper (the paper should be 10 pages or less) and a short summary of the paper (the paper should be 10 pages or less) and a short summary of the paper (the paper should be 10 pages or less).

Participants, who wish to contribute oral and poster presentations, workshops and trade exhibitions at this Congress are welcome too.

A brief summary of the presentations could be submitted by February 28, 2002 to:

The Editor, 36th Survey Congress
Fax: (+675) 475 4957
ATTENTION: JAMES TAUNAGITA

Or electronically to: jtaunagita@aps.com.pg

Please include the following information:

1. Presenter's name, address, the number, telephone, fax and e-mail address.
2. Title of presentation.
3. Type of presentation (oral, poster, workshop, trade exhibition).
4. Abstract (maximum 200 words).

For further information contact Mr. Luther Sipison, The Congress Manager, P.O. Box 4474, LAE, Morobe Province, Papua New Guinea. Telephone: (+675) 475 3465, Fax: (+675) 475 3465, Email: luther@aps.com.pg

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News Update : 2002 PNG Survey Congress, LAE

2002 Congress Manager Luther Sipison reports that arrangements are going well for the PNG Survey Congress to be held in Lae this July.

The theme of the congress - "Surveyors Need for Progress in the 21st Century" has attracted a lot of interest from government departments and the academic fraternity at Unitech. Luther has indications that technical papers will be presented from the Office of the Surveyor-General, the National Mapping

Bureau, the Policy & Planning plus Human Resources Sections, Dept of Lands, as well as a number of papers from the Dept of Surveying & Land Studies (Unitech). Luther's only worry at this time, is there anybody out there who's going to give a technical paper representing the private enterprise point of view !!! There's still time, so how about hopping to it some of the private surveyors out there. More news next issue



GPS / GIS AT WORK IN THE PNG MINING, PETROLEUM and GAS EXPLORATION SECTORS

Excerpts from Porgera JV, Oil Search and Dept of Petroleum & Energy as published in the PNG GIS User's Group Information Memorandum Aug 2001

GIS ACTIVITIES WITHIN PORGERA JOINT VENTURE

My name is Naden and I have been working here at Porgera Joint Venture, in the GIS Section, since its inception in early 1996. Today different departments within the organisation are beginning to see and experience the value of having GIS as one of the on-site facilities.

The GIS is basically set up as follows :

1. Base Map

All the work at PJV is based on three different grids - Porgera Grid, AMG and Mine grid. The Porgera Grid and the Mine Grid are local grids. All of our data are directly related to the mine operation, which are from original ground survey pick-ups. This dataset represents areas of damage caused by the operation of the Porgera mine. Things like gardens, bushes, sacred sites, gravesites, and fences, roads, rivers, clan boundaries etc form the basis of our data collection. Only recently the inclusion of our aerial survey (99/2000) has given us the much-needed advantage where base maps are concerned.

2. Land Compensation

Based on the surveyed data, polygonised areas are compensated to the correct landowners. Compensations come in the form of a claim, which follows a strict format and procedure. All the data is kept in our database utilising *MS Access*. The spatial link between the db and the graphics part is the claim number. The two are connected via ODBC.

3. Future Planning

It is envisaged that with aerial photo survey used as the base map, a better control over land acquisition and mine stages can be achieved. This also includes dump stages planning. Already we are beginning to see the results of that aspect. However, the amalgamation of GIS with hardcore engineering is at its minimal, and more detailed GIS information is required before venturing on an engineering plan.

Here we are dealing with land related matters on a daily basis. With GIS in operation in Porgera, making a decision regarding compensation issues has never been easier. As the landowners here put it, "as the computer making decisions regarding their land". Although it didn't go down well with them at first, everyone is now getting on the idea behind GIS.

GIS ACTIVITIES AT HIDES GAS FIELD

Oil Search here at Hides Gas Field works very closely with the landowners. For that matter, we need accurate population figures, the terrain of the land, land usage, clan boundaries and many others. The company has so far collected some accurate information by carrying out household surveys, land boundary demarcation using GPS, building helipads along the seismic lines, rig sites using GPS and by social mapping.

The information that we provide have enabled not only Oil Search Ltd, but the Joint venture Partners as well like Exxon Mobil, Esso and Chevron to identify possible rig sites for drilling. The information we have in our GIS has also enabled the anthropologists to carry out the social mapping in the impacted areas.

Landownership is a very complex issue up here, and so we need to accurately maintain all our records whether they are mappable objects or hardcopy documents using our GIS Tool. We have linked three applications - *MS Access*, *Acrobat Exchange* and *MapInfo* to make our GIS operation work well. GIS is a powerful tool that lets this organisation display data graphically or retrieve written documents linked to graphical data electronically. An example is showing graphically what has been done in a particular village and how much was spent in monetary value.

To make the system work, we need villages to be in their correct locations, and we have found that many shown on current maps are not accurately located. These we have relocated in our GIS by using GPS points.

PETROLEUM DIVISION PETROLEUM & ENERGY DEPT

Digital mapping data being acquired from the National Mapping Bureau under a World Bank project will be used in a number of ways :

Promotion of the Oil & Gas Industry

The oil industry in PNG is declining as the known reserves are being pumped dry. PNG has extensive gas reserves, but currently has no infrastructure to deliver the gas to market. Part of the work of the Pet-

roleum Division is to promote PNG as a place for foreign oil companies to come and do business, both in developing known reserves, and in exploring for new ones. Much of the work revolves around maps. Companies want to know where existing petroleum resources are, where their licences are, etc. If we had a definitive set of 1:250,000 scale (or better) digital maps for the country (and in particular the oil producing areas in the Southern Highlands), then we could supply them with information quickly and easily in digital format with meaningful points of reference.

Resolving Landowner Disputes

One of the things which detracts from overseas investment in the petroleum sector in PNG is the history of messy disputes involving rival landowner groups. We have now learnt that adequate social mapping and landowner boundary disputes must be resolved early on in a resource project.

The NMB has undertaken a village mapping program whereby all known villages have been mapped using satellite technology (GPS). This data could be used by the Petroleum Division as a starting point for social mapping and as a useful reference set from which to compile more detailed maps in the field using GPS receivers. The proposed PNG gas pipeline will require detailed social mapping along its length, and the NMB village mapping data will be very useful during the planning stage of this route.

Landowner Liaison

Both the 1:250,000 map data and the village mapping data would be useful during liaison with landowner groups. Landowners often visit our office in Port Moresby seeking information regarding current work activities in their particular clan area. It would be very useful to be able to show the NMB data on a computer to landowners and other interested parties.

We could overlay our own datasets, such as geophysical survey lines, exploration licence boundaries, oil well locations and disputed landowner boundaries and print out a map for them to study later - with points of reference which are meaningful to them such as villages, forks in rivers, hills, etc., We currently produce maps for this purpose, but they do not show enough detail for the landowners to relate the map to where they or their neighbours live.



ASPNG SURVEY CONGRESS THEMES

Courtesy of President Steve Low

Year	No.	Theme	Location
1966	1st	???	POM
1967	2nd	???	???
1968	3rd	???	???
1969	4th	The Role of the Private Surveyor in a Developing Country	???
1970	5th	The Surveyors Participation in Major Economic Development	LAE
1971	6th	The South West Pacific and the Surveyor	Rabaul
1972	7th	The Surveying Profession in an Independent Papua New Guinea	POM
1973	8th	Conception and Birth	LAE
1974	9th	Surveying : Future Trends and Techniques	Kieta
1975	10th	Backsight and Foresight	POM
1976	11th	Co-operation or Confusion	Madang
1977	12th	Technological Obsolescence - Can PNG Afford It ?	POM
1978	13th	Customary Land - The Surveyor's Problem	LAE
1979	14th	Surveying for Future Generations - The Year of the Child	POM
1980	15th	C.A.S.L.E. Regional Meeting	POM
1981	16th	Survey Training and Technology in the South Pacific	LAE
1982	17th	The Land, It's People and Surveyors	POM
1983	18th	The Challenge of Change	LAE
1984	19th	Man and His Land - The Surveyors Challenge	POM
1985	20th	Seeking Stability in a Volatile Environment	Rabaul
1986	21st	More than a Jigger Man	LAE
1987	22nd	The Economic Development of Small States C.A.S.L.E. Joint Conference	POM
1988	23rd	Resource Development - Challenges & Opportunities for Surveyors	LAE
1989	24th	Affordable Modern Technology Systems in Developing Countries	POM
1990	25th	Land Mobilisation in Papua New Guinea - An Overview	Rabaul
1991	26th	The Resources Boom - Are Surveyors Prepared ?	POM
1992	27th	Focusing on Productivity	LAE
1993	28th	Scanning the Twenty First Century	POM
1994	29th	After Resource Development - What Next ?	Rabaul
1995	30th	The Surveying Profession in the 21st Century	POM
1996	31st	The Surveyor's Role in Resource Development	LAE
1997	32nd	Surveying New Horizons - Beyond the Black Box	POM
1998	33rd	Surveying - The New Generation	Madang
1999	34th	Century 21 : Time for Surveyors to Regain the Ascendancy	POM
2000		Combined Seminar (AGM held in Port Moresby)	LAE
2001	35th	From Mastamak to Spatial Data Professional	POM
2002	36th	Surveyors Need for Progress in the 21st Century	LAE

SURVEYORS CPD QUIZ

A Geodimeter is an electronic distance measuring instrument which utilises the velocity of :-

- A. Sound waves
- B. Light waves
- C. Electromagnetic waves
- D. Microwaves

Answer B (arguably) was the correct response to the last question.

Software Review : FUGAWI 3 Program

One of the more affordable GPS tracking programs (at around AUD\$ 200.00) is Canadian-based Northport Systems' *Fugawi 3* software.

The manufacturer's motto of "Know Where You Are Going" speaks well of this attractive little package. Digital base map input is available for a number of formats eg Geographic Map Format (GMF) and Vector Map Interface (VMI). A number of proprietary maps can be imported into the system - BSB Nautical Charts, US Geological Survey DRG digital topographic maps, SoftChart products and ChartTiff products.

Regrettably, digital maps in .DWG, .DXF, MapInfo and Shape formats cannot be imported into the system. This is overcome by the programs ability to import any digital image file including scanned map or aerial photography images. Full details of the program are available from the website : <http://www.fugawi.com/>

Perhaps the only unfortunate side to the program is its name - somebody's bound to say 'where the *Fugawi* ?' at sometime.

Preliminary Results : ASPNG Members' Survey

To those 9 members of the ASPNG (less than 10% of the membership) who responded to the questionnaire - Thank You. The preliminary results are as follows :-

Q1. Re encouraging other professionals to join the ASPNG—9 / 9 voted YES

Q2. Re who might be encouraged to join the ASPNG it was suggested that GIS people, Cartographers, Spatial Data people, Geographers, Valuers, Civil Engineers and other allied professionals.

Q3. Re would a change of name benefit the Association -YES, suggested names (Q. 4) :-

Institute of Surveyors 4 Votes

Inst of Surveyors and Spatial Data Personnel 1 Vote

PNG Surveyors, Valuers & Cartographers Assoc'n 1 Vote

Assoc of Surveyors and Land Managers 1 Vote

PNG Inst of Surveyors & Spatial Data Professionals 2 Votes

Q5. Re amalgamation - 6 YES, 3 NO

Q6. Re the above being on a formal or informal basis - 3 formal, 4 informal

Q7. Re change from Mastamak to Spatial Data Professional - 7 YES, 2 NO

Q8. Re does what happen overseas have a bearing here - 8 YES, 1 NO

Q9. Re ASPNG adopting a CPD program - 5 YES, 4 NO.

"Fore-Sight" thanks Hon. Sec Dickson Tauangita for this information.

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Members & Other News ...

There are sometimes some unusual references to Surveyors and Surveying, like in the Bible for instance : *So the Lord banished him from the Garden of Eden ... (Gen 3:23). After he drove the man out, he placed on the east side of the Garden of Eden cherubim and a flaming sword ... (Gen 3:24).* This would infer that the Garden of Eden had definite boundaries, and that those boundaries were established by a Surveyor at the time of Creation. Surveyors were also busy setting monuments and permanent marks ... *Thou shalt not remove thy neighbour's landmark, which they of old time have set in thine inheritance ... (Deut 19:14, 27:17, Job 24:2) and Remove not the ancient landmarks, which thy fathers have set ... (Prov. 22:28) or ... They took stones, and made heap ... And Laban said : This heap is a witness between thee and me this day ... (Genesis 31, 46-19).*

On a less esoteric note, APS surveyors had rough time of it doing a detailed road survey between Wabag and Laiagam late last year when they were held up and lost their survey gear and 4WD vehicle. Somewhat reminiscent of what happened to surveyor Stu Thompson (NHC) some years ago in Mt. Hagen.

And talk about doing it rough - on a recent road investigation survey between Tabubil and Oksapmin, surveyor Ilias Isicar and a civil engineer collapsed during an ascent of the Hindenberg Wall in pouring rain, 40 knot winds and a temperature of only 8 degrees. However, surveyor Michael Askimali breezed through the exercise and completed the survey as well as doing the engineer's job.

Rumour has it that surveyor Bob Curley has changed from the academic life at UniTech to do his own thing as a private practitioner specialising in GPS control surveys amongst other things.

CARTOGRAPHERS TO CONSIDER ADOPTING CPD PROGRAM UNDER NEW CONSTITUTION

Cartographers have been asked to consider the adoption of a Continuing Professional Development (CPD) program that will be incorporated as an integral part of their new Constitution. The aim is to enable members of the Institute to remain at the forefront of the practice of mapping science, information management & presentation, thus enhancing their ability to provide an efficient and effective service to the community.

The PNG Institute of Cartographers will adapt the Mapping Sciences Institute Australia's CPD model based on accruing 70 points over a two year period to suit the PNG situation. While not compulsory, members will be encouraged to support the program.

CPD points can be achieved in a number of ways :-

	A	B	C
• Professional Qualification	80	60	40
• Attending Training Programs	30	20	10
• Attending Seminars	20	10	5
• Obtaining an Award	50	30	10
• Attending National Conference	30	20	10

• Holding Office on Council	30	20	10
• Other Contributions to the Inst.	30	20	0
• Winning Prize for Excellence	20	20	0
• Projects Undertaken	30	20	0
• Publications	50	30	20
• Technical Sessions or Visits	20	10	0

The three grades will be rated as follows :
A = Highest Standard for CPD involvement
B = Medium Standard for CPD involvement
C = Low Standard for CPD involvement

The objectives of the CPD program include establishing and maintaining a high professional standard, introducing a means for associate members to progress to corporate membership, making sure the Institute holds a prominent role in the development of education and training, and ensuring that the professional reputation of the Institute is maintained at the highest level. Current indications are that members of the PNGIC will accept this proposal thereby creating a benchmark for other organisations to match.

Editorial Comment : Hooked On A Theme ...

Reflecting on the themes adopted by the ASPNG for Survey Congresses over the years, I am impressed by the timeliness and relevant nature of the various topics and issues that have been addressed during the 35 get-togethers of surveying professionals in this country.

A few statistics on the percentage of themes directed towards certain areas (as can be ascertained from the more obvious themes) indicates the following :-

• Looking to the future	6.6%
• Accepting a challenge	8.3%
• Technical advancements	16.6%
• Resource development	19.4%
• Customary land issues	22.2%

The remaining percentage is divided up into various areas (some are

a little too cryptic for me to understand). Education and training also rate special mention. Surveyors obviously enjoy a challenge, and looking to the future. A high priority is placed on technical advancements, resource and economic development, and that most controversial issue regarding customary land.

Surveyors in PNG certainly have no identity crisis. The words surveyor or surveying or words related to surveying are contained in 61.1% of the various Congress themes.

The theme for last year's Survey Congress was most apt, and the theme for the July 2002 Congress is also timely and relevant.

But for me, there's one theme that sums it all up - the theme from the 1986 Survey Congress in Lae - *"More Than Just a Jigger Man"*, and as long as we keep this in mind, we will move forward. - Ed.