



May 2013

Letter from the Chair

Dear Readers,

Welcome to the Fungis Newsletter for May 2013.

This newsletter comes as a timely reminder to signup for the Fungis 25th year annual conference and celebration dinner 'Ground to Cloud' to be held on 6-7th June. This newsletter also comes in plenty of time to remind you of LiDAR Technologies 2013, to be held on 22-23rd of August. These events will be at the Pacific International Hotel in Cairns and information on both is available from the Fungis website.

The conference committee have been incredibly hard at work and have assembled an amazing program for the 'Ground to Cloud' conference in June. Do yourself a favour and review the current conference program, now available for download from the Fungis website. While you are there, check out the high quality commemorative '25 years of Fungis' polo shirt, available for order online.

The editorial committee have again brought together another great newsletter. This edition concludes the concise history of Fungis, thanks particularly to Leigh Twine's hard work on this! Meanwhile, in the background, the executive committee have been busy keeping the Fungis machine well oiled and running smoothly.

With the AGM coming up, why not consider a role on the Fungis Executive Committee, the only management committee in town whose name ends with 'is' and begins with 'Fun'! It's a great professional development experience and gives you an inside eye to the industry.

I cannot conclude this message without acknowledging all the hard work, laughter and cooperation shared by the many Fungis volunteers over the last year, so thanks everyone, it's challenged us all but been heaps of fun! I would also like to take a moment to acknowledge the many contributions of some executive committee members who have resigned from the management committee since our last AGM, specifically Mike Digby, Laise Harris and Peter Ludlow—thankyou, your efforts have been sincerely appreciated.

See you all at 'Ground to Cloud' next month!

Alistair Hart

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Editors Corner

The editorial team needs your help in developing upcoming issues of this newsletter which we hope to deliver to you every quarter. Please send us any fun pictures and articles relating to your work in GIS. After all it is not all just in front of the computer! We need funny stories about what people think GIS is, hair loss incidents from dealing with software and inspirational and innovative projects that you are working on, have seen online or at conferences.

The Editorial team

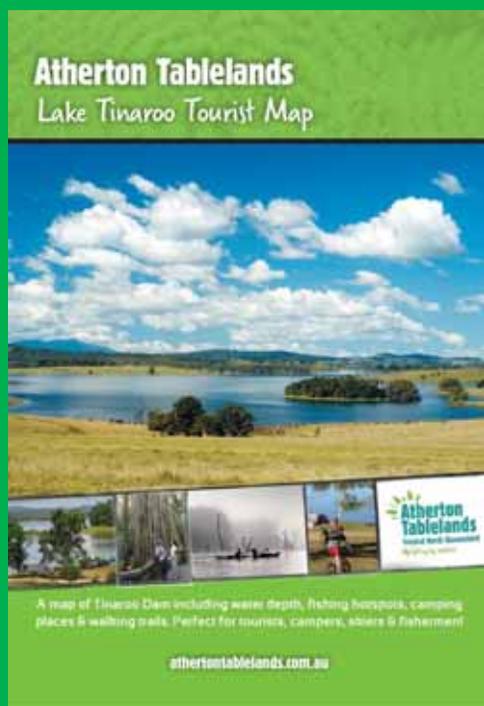
George Corea, Sera Lambe, Anne Stapledon and Leigh Twine

communication@fungis.org

The creation story - Lake Tinaroo Tourist Map

Rob Copland, Atherton Tablelands GIS

When I started at Atherton Tablelands GIS (ATGIS) in Dec 2009 my coordinator, Alistair Hart, requested I look into the prospects of creating a map of Lake Tinaroo aimed at the users of this very popular recreation area. The map would build on the boating hazard data ATGIS had already acquired to produce the boating hazard maps once available on the ATGIS website. The goal was to create a map of the Lake Tinaroo area that was both attractive, informative and hopefully with a touch of the innovation that ATGIS is known for.



In our GIS data library, we had an old contour dataset of the current Lake Tinaroo area from the pre-dam era. The contours appeared to have been digitised from an old topographic map. The data was in need of a bit of TLC as some contours overlapped and there were gaps present in some of the contour lines. With a bit of minor editing the contours were cleaned up without the loss of the original integrity of the data. With the use of the ArcGIS Topo to Raster tool a raster surface was created and symbolised with a dark blue to white colour ramp to visualise the depth of the lake based on the original land surface now covered in water.

Another cartographic feature of the map is the hill shading and imagery background. The hill shading was produced with the use of a DEM and couple of ArcGIS tools; the Swiss effect hillshade and the multidirectional oblique weighting (MDOW) hillshade. The Swiss hill shade tool creates two separate raster layers and also uses the original DEM in the end product. The MDOW tool creates one raster layer from the original DEM that also needs to be added to the three Swiss hillshade rasters. With the use of the correct display transparencies, and order of the rasters, an effective hill shade product is produced.

Complicating matters somewhat was the need to add the aerial imagery raster on top of the hillshade rasters. After some trial and error with transparency percentages an acceptable outcome was produced with the total of 5 raster layers. The hillshade tools and other cartographic resources are available on the ESRI Mapping Centre web site <http://mappingcenter.esri.com>

This tourist map project gained interest in 2012 from other areas of the Tablelands Regional Council and ATGIS decided to complete a public hardcopy publication of the map, with support from the Atherton Visitor Information Centre and Tropical Tablelands Tourism.

Although much of the hazard data had been collected in previous years by ATGIS, it was of course our duty to spend at least one day on the lake to 'ground' truth the existing data and acquire as much pertinent new data as possible. This field trip allowed us to map several additional areas of submerged timber, areas of shallow water, changes to navigation signage and camp sites accessible only by boat. ATGIS staff also mapped additional terrestrial features such as walking tracks and points of interest and included the latest Tablelands Regional Council road data.

The community was also engaged to provide lots of information for the map and it's reverse side, such as fishing hotspots, recreational activities, points of interest and facilities in the area that can be used by the visiting public.

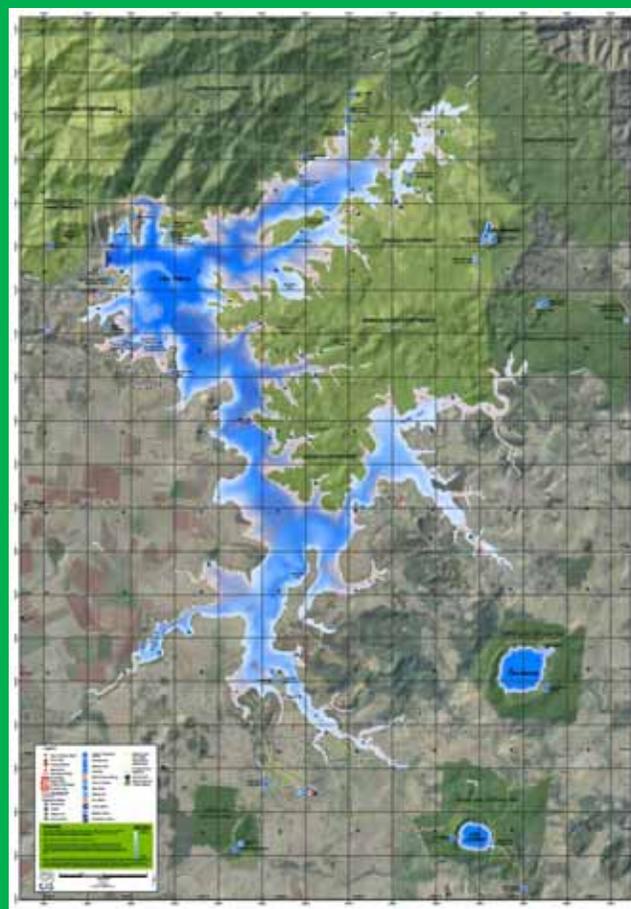


Figure Two: 'Thumbnail' image of Lake Tinaroo map

ATGIS published the first version of the Atherton Tablelands Lake Tinaroo Tourist Map in January 2013.

If you are interested, this A1 foldout paper map is available for purchase for \$9.95 from all good tackle stores, newsagents, map shops and directly from ATGIS.

For further information on this map, call ATGIS on 07 4091 8600 or email easyfind@atgis.com.au

Report from the International LiDAR Mapping Forum, Denver February 2013

Alistair Hart – alistairh@atgis.com.au

I recently had the good fortune to attend the 13th International LiDAR Mapping Forum in Denver to check out the latest in LiDAR technologies. Whilst it was pretty darn cold outside (max temps hovered around -1 degrees Celsius), the 858 delegates and 80-odd exhibitors proved that LiDAR is still some pretty hot technology!

The software industry was well represented with the regular mainstream industry vendors (eg. Autodesk, Bentley, ESRI and Merrick) waving the flag. In amongst the big guys was a really interesting mix of emerging software vendors including Di-elmo, Terrascan, TopoDot and Virtual Geomatics, each with an interesting value proposition and occupying a specialized niche in the market.

One thing I noticed was the perception of 'strategic linkages' between particular software firms and hardware providers – it seems as though mutualism might extend well beyond the marine life in the Coral Sea which is OK, so long as you keep an open mind...

From the big boys and their toys perspective, there were many

hardware representatives present, from emerging solutions providers like Lida-rUSA through to the regular firms, including Optech, Riegl, Topcon, Trimble and more with bits of kit ranging in price up over the million dollar mark. Despite my best efforts, I did not get to every exhibitor (or score any free hardware samples!)

One of the coolest bits of hardware I saw on offer was a handheld laser scanner for scanning building interiors (eg. for facilities management and real estate markets).



Designed by www.3Dlasermapping.com, this device can scan all day long, weighs less than 700 grams and is retailing for ~\$20,000 – an interesting bit of gear! There were also three mobile mapping vehicles parked out the front for delegates to take for a spin. My pick of them was the black Riegl Mercedes SUV for sheer style, although it's very fair to say that the white Optech GMC van had oodles more leg room!

The exhibition hall also held it's fair share of companies offering LiDAR scanning services, no doubt pitched at the many US State Departments of Transport employees wandering the halls.

The program included some great features on emerging LiDAR acquisition platforms, great examples of LiDAR workflows and much discussion on the generation of guidelines and standards for LiDAR equipment purchasing, operations and project specification, promising to make the whole darn sector of our industry a little more accessible and comprehensible to the rest of us non LiDAR-enabled folks.

Three days is not long enough to absorb all that is on offer at this conference but if you want a mentally exhausting challenge, you can find one here! More info on this event can be found at: <http://www.lidarmap.org/> - if you're organized, you could probably even squeeze in a ski trip to the Colorado Rockies – with deep powdery snow as close as an hour away.



The scale of the International LiDAR Mapping Forum event was awe inspiring and gave me a few good ideas for the LiDAR Technologies 2013 event which has been accepted by the SSSI National Board as an event which can be promoted as a 'national event' and thus will be promoted to the national SSSI membership, promising a much greater level of national participation in our event.

While in Denver, I spent a bit of time promoting our own LiDAR Technologies event here in the tropics and hope to entice a few international LiDAR experts to head out here in August on the promise of loads of balmy tropical sunshine and easy access to the Great Barrier Reef. One of the outcomes I am aiming to achieve for this year's LiDAR Technologies workshop is to have some serious LiDAR technology on offer, including at least one vehicle equipped with vehicle-mounted LiDAR (mobile mapping) available for you to check out and take for a test drive to see how it works.

Meanwhile, if you are interested in presenting, drop me a line via email with a title and short (<200 word) abstract.

Fungis still has a 50% share in the LiDAR Technologies 2013 workshop, so it's good news for all of us too. We also do a lot of the event organizing, and I'm looking for some helpers to assist in the years event. If you think you can spare a bit of time to lend a hand, give me a call on 0409 885 776 or email me at mangoesmapping@westnet.com.au - thanks!

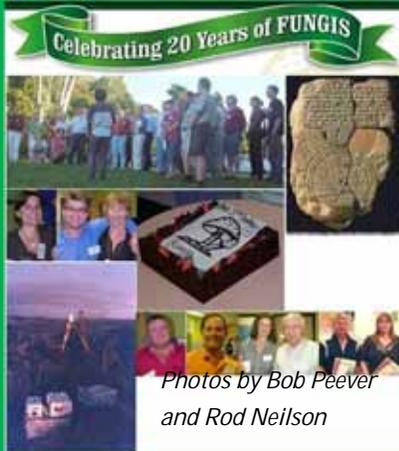
Fungis History overview cont.



Friday 15th August 2008, Fungis celebrated 20 years of sharing spatial knowledge at a packed conference held at James Cook University.

The Fungis Exec. Consisted of :

Chair: Reuben Sinclair
 Deputy Chair: Sharlene Blakeney
 Secretariat & Treasurer: Meagan Cross
 State Gov. Rep: Liesl Harrold
 Local Gov. Rep: Laise Harris
 Natural Resources Rep: Jason Allen
 Cultural Heritage Rep: Rod Neilson
 Research/Federal/CSIRO Rep: Pertina Pert
 SSSI Liason: Alistair Hart



This was a year where Fungis members numbered 100 with some working with the community to provide the spatial content to many worthwhile projects.

Bob Peever worked on the Yalanjiwarra Jalunji Marrjanga Aboriginal Corporation Cultural Heritage Recording Project. This project represented the cultural interests of the 5 Eastern Kuku Yalanji Clans whose traditional lands span the area between the coast and Great Dividing Range from Pretty Beach to the Annan River south of Cooktown. Rod Neilson, the Spatial Information Manager at Giringun Aboriginal Corporation, travelled from Cardwell to generously share his knowledge.



Rod sharing his knowledge, on the recording of an archeological site.

The Fungis Chair, Ruben Sinclair, was attributed as the major coordinating member of 'The Spatial Mathematics for Mareeba Cluster Students' project. This project aimed to enhance the core mathematics outcomes for students from rural and remote schools within the Upper Mitchell River Catchment as well as raise awareness of the spatial sciences.

Fungis members held the last exec. meeting for 2008 by getting together at the Bottom Pub at Kuranda. Following was nibbles with all potential new members are welcome, but probably not the fly in the dipping sauce.



Photos by Rod Neilson

Fungis members received awards for excellence in spatial information at the Queensland Spatial Excellence Awards (QSEA). These awards are the state equivalent of, and lead into, the Asia Pacific Excellence Awards (APSEA).



Adella Edwards Spatial Professional Of the Year



Highly commended for People and Community were Atherton GIS (ATGIS) For their 'Northern Queensland Wildfire Mitigation' Project



Category of Small Project was awarded to Searle Consulting NQ Pty Ltd for their project 'Eumundi Project 3D Modelling'.



Fungis members and their friends and family came together on November 29 to celebrate the Fungis 2008 Christmas event. This time, it was barefoot bowls at the Edge Hills Bowls Club, accompanied by drinks, nibbles and lessons. Great fun was had by all ... and lots of stylish bowling techniques were on display.



2009 saw a very successful year kick off with the Far North Queensland SSI Young Professionals holding their first social event at the Atherton Ten Pin Bowling on the 16th January.

The first workshop on the 8th February with the 'GIS File and Data Management workshop', held at the Tradewinds Esplanade in Cairns, thanks to Alistair Hart and Bob Peever.



The 'Mapping Cultural Heritage and Native Title' workshop was on the 24th April, thanks to Megan Cross, Rod Neilson and Bob Peever.



June 12th saw the 'Editing and Maintaining the Fungis Website' half day workshop.

The Fungis Annual Conference for 2009, 'Emerging Spatial Technologies', was held at the Rydges Tradewinds Esplanade on Thursday 13th & Friday 14th August. Following yet another successful conference, the Young Professionals organised a Reef trip from Cairns to the Great Barrier Reef on Saturday 15th August. The Fungis Directions Forum & AGM was held on the 13th during this conference.



Photos provided by Derek Tickner

9th October saw another half day workshop 'Reef Atlas and Water Mapping'.

27th November it was the 'Weeds' mapping workshop and end of year get together.

4th December the 'Mapping River to Reef' workshop was held at Mission Beach with a sumptuous dinner at the Castaways Resort.



ATGIS was recognised in the 5th Annual SIBA Qld Spatial Excellence Awards with a Highly Commended Award for Small Project with the Cassowary Coast Community Flood Awareness Website

Les Searle with True 3D and Conics received an Industry Award for People and Community with his project 'Torres Strait Sustainable Land Use Planning' project. Les also received the JM (Mac) Serisier Award for Overall Excellence.

2009 was the year of the release of the most complete topographical map of the earth, captured by ASTER.

CSIRO developed an airborne, remote-sensing instrument that could 'see' beneath the water, even when the water was cloudy, by the use of optical and acoustic technologies.

Sharlene Blakeney held everything together for the executive during 2008/09, with movement of executive members included Liesl Harrold resigning because of changing directions in the Office of Economic and Statistical Research (OESR), Meagan Cross resigned after several dedicated years.

The 2009/10 executive started work following the AGM held during the August 2009 conference

Chair: Reuben Sinclair
Deputy Chair: Vacant
Secretariat/Treasurer: Vacant
Local Gov. Rep: Alistair Hart
Cultural Heritage Rep: Rod Neilson
Research CSIRO Rep: Petina Pert
Federal Gov. Rep: Laise Harris
Education Rep: Anne Stapledon
SSI Liaison: Alistair Hart
Private Industry Rep: Gareck Packer
Life Member: Bob Peever
Life Member: Alan Stafford

2010 was the year Fungis co-hosted the 'Pest and Weed Management Spatial Toolbox' workshop with the Far North Queensland Regional Organisation of Councils (FNQROC) on Wednesday 26th May. This one day workshop was held at the Cairns Regional Council and aimed to summarise the current developments, methods and tools for the capture and management in recording and reporting pests and weeds.

Alistair Hart received the Qld 2010 Individual Award for Services to the Surveying and Spatial Community



May 2011 saw the first dedicated 'LiDAR Technologies' two day conference in Cairns.

Following in August 2010, was the Annual Conference 'Earth, Water & Fire' held at Rydges, Cairns. This was another hugely successful Fungis conference with lasting memories of speakers being recorded by Rod Neilson and saved on DVD's by Sharlene Blakeney.

The 2011 AGM and one day Fungis Fun Day was held in June, started with an amazing visit to the Great Barrier Reef International Marine College, organised by Bob Peever.



While it proved Fungis members may be pretty good Spatial Industry Officers, we weren't too good with navigating vessels into the Cairns Port with many 'maritime incidents' on the navigating simulators.

A sumptuous lunch was had at the Cairns Yacht Club with a Australian Navy speaker outlining their hydrographical survey work and Peter Ludlow's presentation on shallow water hydrology.

The end of year event was held at Dunwoody's Tavern. After the executive meeting and lunch, Alistair Hart provided training for Fungis members to better manage the web page. The guest speaker, David Hine outlined how to convince managers about the benefits of GIS and Spatial Technologies.

2012 saw a hugely successful three day Conference which combined LiDAR Technologies, the Fungis AGM and the SSSI Northern Group meeting and was held at the Pacific International Hotel on 6th - 8th June. This coincided with the Transit of Venus which saw Les Searle set up a portable SolorScope as well as present a related paper. Yet another delicious dinner was held, this time at the Hilton International Hotel.





2012, Fungis member Les Searle's outstanding achievements were acknowledged by the SSSI by being elevated to Fellow of the Surveying and Spatial Sciences Institute. This award was presented to Les for outstanding service to the spatial industry in Queensland and acknowledged the respect Les holds in the spatial community.

The Exec. Committee for 2012/13 elected at this AGM being:

Chair: Alistair Hart
Deputy Chair & SSSI Liaison: Les Searle
Treasurer: Rahman Schioning
Secretary: Anne Stapledon
SSSI Liaison/Regional NRM Bodies Rep: Mike Digby
Local Gov. Rep: Rob Copland
State Gov. Rep: Melanie Smith
Commonwealth Gov. Rep: Laise Harris
NRM Rep: Trevor Parker & Nilo Gobus
Conservation Rep & Newsletter Editor: George Corea
Private Enterprise Rep: Peter Ludlow, Leigh Twine, Les Searle
Cultural Heritage/ Newsletter Rep: Sera Lambe
Life Members: Bob Peever, Alan Stafford

A free Digital Globe Seminar/Webinar was hosted by SSSI and Digital-Globe, on Tuesday, 13th November at Cairns Local Disaster Coordination Centre, 61-79 Windarra Street Woree.

16th November 2012 was another workshop at the Pacific International Hotel for the 'Smartphone and Spatial Applications' workshop. This coincided with the total solar eclipse that crossed Cairns on the 14th November. Speakers at this workshop outlined the security issues associated with downloading apps onto your smartphone, what useful map apps that were available as well as Dr. Kate Russo spoke on the phenomena of the total solar eclipse.

Fungis was sad to see Peter Ludlow and Mike Digby resign during the year owing to huge work commitments. Equally sad was the departure of Laise Harris from the Fungis Executive in 2013, due to family circumstances.

2013 is here and Fungis is, in its usual manner, preparing for another year of spatial learning.

Planned for this year is the AGM and Annual Conference on June 6th & 7th. This is also the 25th year Fungis has been operating as an Incorporated body.

The theme for the conference is 'Ground to Cloud' and will be held again at the Pacific International Hotel. A dinner will also be at the Pacific International Hotel on the 6th June. Keynote speakers will be the CEO of ESRI, Mr Brett Bundock.

Bits and Pieces - Thanks to Louise Alsford

What's next for Google maps?

Following on from use of vehicles for street view throughout the world Google have been developing different methods of capturing views and maps for everyone to enjoy. Most recently they have captured the walking tracks of the Grand Canyon using back packs, ski slopes throughout the US using snow mobiles, and have also captured exhibits of various museums.

Check these projects through the following links:

<http://google-lailong.blogspot.com.au/2013/02/ski-resorts-now-on-google-maps.html>

<http://google-lailong.blogspot.com.au/2013/01/exploring-grand-canyon-on-google-maps.html>

<http://googleblog.blogspot.com.au/2012/07/indoor-google-maps-help-you-make-your.html>

Geo services driving economic growth

Ever stopped to think about how geo services are driving economic growth? It is understandable with how technology has been booming over the years. Check out the link below for some more truly interesting facts about geo services and how they are affecting the global economy.

<http://google-lailong.blogspot.com.au/2013/01/mapping-creates-jobs-and-drives-global.html>

Spot the station

Interested in astronomy? Then you will be glad to know that NASA now send out automated email notifications to you when the international space station is within view. Emails detail the time, duration and appearance directions for the pass of the station across the night sky.

www.spotthestation.nasa.gov

Google Earth

We all use Google Earth at one time or another but have you really spent time looking at all the layers and setting available, as these are continually changing and being developed. Try the real time weather layer which provides global cloud and radar data or explore the work of non for profit organisation such as UNICEF, WWF and the like.

<http://earth.google.com>



Also planned for August is another joint Fungis and SSSI LIDAR Conference to be at the Pacific International Hotel.

Please find details in the Fungis newsletter as well as at www.fungis.org

Q: HOW MANY PH.D.'S DOES IT TAKE TO GET A POWERPOINT PRESENTATION TO WORK?



ANSWER: (n+1)

WHERE n = THE NUMBER OF ACADEMICS IN THE ROOM WHO THINK THEY KNOW HOW TO FIX IT, AND 1 = THE PERSON WHO FINALLY CALLS THE A/V TECHNICIAN.

Bits and Pieces (cont'd)

Google publishes commissioned study on how maps drive jobs and economic growth...

Extract below from the [Google LatLong blog](#)

Twenty years ago, we used paper maps and printed guides to help us navigate the world. Today, the most advanced digital mapping technologies—satellite imagery, GPS devices, location data and of course Google Maps—are much more accessible.

This sea change in mapping technology is improving our lives and helping businesses realize untold efficiencies. The transformation of the maps we use everyday is driven by a growing industry that creates jobs and economic growth globally.

To present a clearer picture of the importance of the geo services industry, we commissioned studies from Boston Consulting Group (BCG) and Oxera. What we found is that maps make a big economic splash around the world.

In summary, the global geo services industry is valued at up to \$270 billion per year and pays out \$90 billion in wages. In the U.S., it employs more than 500,000 people and is worth \$73 billion. The image overleaf illustrates some examples of the many benefits of maps, whether it's improving agriculture irrigation systems or helping emergency response teams save lives.

Follow the link above for the full article...



DARPA shows off 1.8-gigapixel surveillance drone, can spot a terrorist from 20,000 feet

Extract below from: <http://www.extremetech.com/extreme/146909-darpa-shows-off-1.8-gigapixel-surveillance-drone-can-spot-a-terrorist-from-20000-feet>

DARPA and the US Army have taken the wraps off ARGUS-IS, a 1.8-gigapixel video surveillance platform that can resolve details as small as six inches from an altitude of 20,000 feet (6km). ARGUS is by far the highest-resolution surveillance platform in the world, and probably the highest-resolution camera in the world, period.

ARGUS, which would be attached to some kind of unmanned UAV (such as the Predator) and flown at an altitude of around 20,000 feet, can observe an area of 25 square kilometers (10sqmi) at any one time. If ARGUS was hovering over New York City, it could observe half of Manhattan. Two ARGUS-equipped drones, and the US could keep an eye on the entirety of Manhattan, 24/7.

It is the definition of “observe” in this case that will blow your mind, though. With an imaging unit that totals 1.8 billion pixels, ARGUS captures video (12 fps) that is detailed enough to pick out birds flying through the sky, or a lost toddler wandering around. These 1.8 gigapixels are provided via 368 smaller sensors, which DARPA/BAE says are just 5-megapixel smartphone camera sensors. These 368 sensors are focused on the ground via four image-stabilized telescopic lenses.

Credit: http://desridonatelli.files.wordpress.com/2012/09/what_gis_analysts_do1.png

Support us by buying

A FUNGIS POLO SHIRT

Visit - <http://beta.fungis.org/index.php/home/8-fungis-facts/6-t-shirt>



Example—Black with white embroidery

FOR SALE

Fungis Polo Shirts

Mens \$42.00 (Plus \$7.00 postage if required)

Ladies \$42.00 (Plus \$7.00 postage if required)

Fill in order form at : www.fungis.com

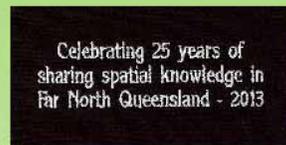
Delivery time approx. 2 weeks



Example—Hot pink with black embroidery

Features

- 100% Cotton, Double pique knit
- Single colour design
- Ribbed style collar and cuff
- 220gsm



SIZES

MENS	S	M	L	XL	2XL	3XL	5XL
Chest (cm)	104	110	116	122	128	134	146

LADIES	8	10	12	14	16	18	20	22
Chest (cm)	93	98	103	108	113	118	123	128

Colours - Black, Navy, White & Hot Pink (Ladies only)

Highlights of Ground to Cloud

- Keynotes by senior staff from Esri and Google
- A wide range of talks relating to GIS practices in FNQ, Australia and beyond

How things have changed

Integrated project planning

Using the cloud

Integrating real-time location data in agriculture

Google: Business and GIS Solutions

Access to Foundation datasets in QLD

Evolution of Spatial Information in NRM

App Security

BAC Indigenous Mapping

Spatial Data Transformation

Landscape Monitoring using Landsat

Development in GNSS and impacts in QLD

- Free Grog sponsored by AGTRIX
- Door Prizes including a Ferrari sponsored by Mangoesmapping (read the small print below!)
- Conference satchels including the Tinaroo Map sponsored by ATGIS, Cloth Hats and essential information on new technologies from C.R. Kenney, Stubby Cooler from Pitney Bowes, a anniversary stubby cooler from Fungis and lots more.
- Spatial Olympics to give you a workout
- Mystery tours and presentations!
- CPD Points—
 - SSSI 16 points
 - AusIMM 16 points
- A whole lot of FUN and opportunities to network
- A bottle of wine for each speaker

Register Now at www.FUNGIS.org

Ferrari is 1:1000 size

What is the economic impact of GEO SERVICES

Geo services are:



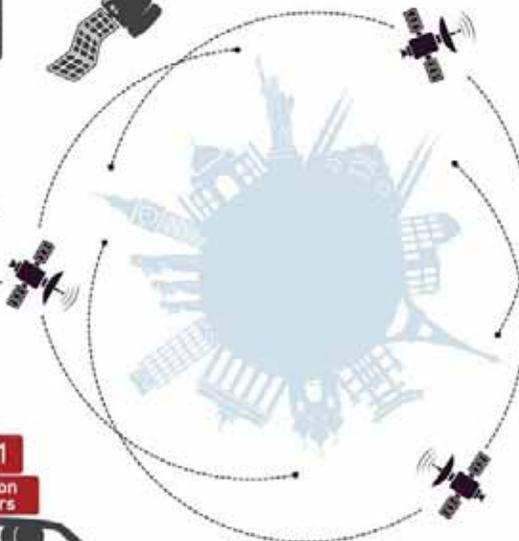
Satellite receivers and manufacturing



Satellite imagery



Location-based search



Geo services global revenues are \$150–\$270 billion per year

Video games industry \$25 billion

Geo services \$150–\$270 billion

Airline industry \$594 billion

Geo services global added value is around \$100 billion per year



Geo services save:



Geo services facilitate competition, leading to savings from reduced prices among infrequently bought goods and services of up to:



Geo services can improve agricultural irrigation, helping to achieve global cost savings per year of:



Geo services save 3.5 billion litres of gasoline per year—approximately 0.1% of the total world production of 5 trillion litres of liquid oil products

Geo services aid faster emergency response; for example, in England Geo services may have helped to save at least 152 lives per year



Students educated using Geo services can expect



3%

higher average wages five years after graduation than those who weren't

Source: Oxera [2013], 'What is the economic impact of Geo?', January.

Upcoming Events

25 Years of Fungis—Annual Conference

Ground to Cloud:

Maintaining the edge in spatial imagination

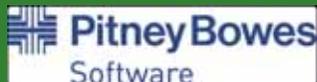
Incorporating Fungis 2013 AGM

June 6th & 7th 2013

Day 1: Keynote Speaker - Brett Bundock - Managing Director, Esri Australia

Day 2: Keynote Speaker - Graeme Merrall—Enterprise Geospatial Deployment Manager, Google

Sponsors of the Fungis Conference



LiDAR Technologies 2013 - Cairns, August 22/23

Shaping up to be fantastic conference

Call for papers still open

www.tiny.cc/lidar2013

**Watch This Space
For Updates**

Hot off the Press...

Lewis Graham (Director ASPRS LiDAR Division) to give keynote at LiDAR Technologies 2013



QCON14 - SSSI's national conference to be held in Cairns 8th-10th October 2014

Tom Hamilton is back in FNQ and looking for GIS/ planning work - details on the Fungis website.

Connect with us ... (these social media pages are in beta and we need your help to keep them updated, contact us at communication@fungis.org if you'd like to help manage the Fungis online presence)

Facebook / Twitter / LinkedIn / StumbleUpon / Delicious/Google+ / MySpace are using fungis1990. This was the year Fungis was incorporated and people are already using 'fungis' for some pretty weird sites :-)