

Issue

03

November
2012

FIG YSN



FIG

YOUNG
SURVEYORS



Oda Stenersen Leiknes settings boundary markers in the Lomsdal-Visten National Park (Norway) during "the best summer job ever" in 2011.

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Chair's Report

Hello all!

Well it has been a busy 2012 and I find it hard to believe we are nearly at the end! This is our second to last issue this year (we hope to produce a December edition full of your photos and highlights from 2012 .. but more on that later!) and I think it's clear from the breadth of stories how busy young surveyors have been around the world.

For myself, this is the year that the FIG Young Surveyor's Network has really grown into itself. Not only did we host the Inaugural FIG Young Surveyors Conference in Rome in May https://www.fig.net/news/news_2012/ysc_rome_may_2012.htm but we were invited to attend and present at the UN-Habitat World Urban Forum 6 Youth Assembly (see p. 5 for the report). This invitation demonstrates two things: firstly, that the youth and land relationship is being increasingly recognized and there is a critical role for young professionals in enabling community participation in land policy; the second is that the YSN has a role to play in broad network and program of work of the FIG. One thing I've heard in the past is that 'youth are the future, but they are also the present'. Meaning that we are here now, and should act as such to protect our future. Over the next few months the YSN will be more visible than ever, attending the FIG Regional Conference in Montevideo, Uruguay, and planning for a series of regional events next year (at the FIG Working Week in Abuja in May, at the South East Asian Survey Congress in June, and joint events with Commissions). So I am asking each of you to make sure you are signed up to at least one of the Commissions to hear their news (view the Commission work plans at <http://www.fig.net/comm/comindex.htm>). Similarly, have a look at some of the UN activities, such as the United Nations Initiative on Global Geospatial Information Management (GGIM) (<http://ggim.un.org>) and the UN-Habitat Global Land Tools Network (GLTN) (www.gltn.net). We are already working closely with GLTN, and I am currently searching for some representatives to become involved in the GGIM. If you would like to get involved in these or any other initiatives then don't hesitate to contact us at fig.youngsurveyors@gmail.com

I look forward to hearing from you, or seeing you at an event soon!

All the best!

Kate Fairlie, Chair FIG YSN

Professional Development

Don't hesitate to get involved!

Everybody is welcome and we are always looking forward to broaden our Network!

You can find us on:

Facebook:
FIG Young Surveyors

LinkedIn:
FIG Young Surveyors Network

Twitter:
@ FIG_Young

E-mail
Fig.youngsurveyors@gmail.com

IV International Training Course in Topography

For Young Surveyors held on 17-28 September 2012 Madrid

The course was held at the Hotel Auditorium Madrid, from 17th to 28th September 2012. There we met 50 surveyors, cartographers and geodesists from 17 countries, with different specializations. Among those who were present was a large group of freelancers. The most common occupational specialties were public works, Cadastre, GIS, photogrammetry, LiDAR systems, and land surveyors. Also it is noteworthy that two of the three Turkish participants investigated on ground deformation. However, I didn't meet surveyors engaged in remote sensing, despite the obvious advantages afforded by these systems for fire detection, study of drought, pests, pollution of rivers and seas, global warming, melting icecaps, identification of natural resources etc.

Course Promoters

The heads of the course were the Italian "Consiglio Nazionale" along with CLGE (Council of European Geodetic Surveyors) and the FIG Foundation (International Federation of Surveyors "FIG"). However all associations shown on the right were involved.

Course Objectives

The objectives were clearly explained in the opening lecture. Of course the classes were important and were really interesting. However, in my opinion, the most important objectives of the course were:

- Create a social network of young surveyors.
- Motivate students to be entrepreneurs, to learn continuously and work hard in order to make our profession grow.
- Work for society: Facing the challenges of the world's population growth, the lack of natural resources and the need to contribute to the proper management of these.

Organization

All course fees were paid by the organization. This hotel has excellent facilities to teach classes and organize lectures and events.

The class and meal schedule was perfect and there was a person who was in charge of coordinating meals at the hotel, visits to Madrid, attendance sheets and generally any problem that may arise during class allowing the teacher to devote himself solely to teach the class. The organization of classes and the "timing" of the events were very well organized.

Classes

- **Techniques and Tools:** Modern GPS, integrated systems, data on-line, integrating surveys with Google Earth, etc.
- **Production of orthophotos by using simple digital cameras and UAV (drone):** In addition to the technical explanation of the process, highlighted the advantage of the low cost that these systems can have.
- **GNSS, details, transformations between geodetic reference systems:** Fundamentals of GNSS systems, static, rapid static and RTK; constellations, sources of errors and corrections, GPS network planning, obtaining baselines, VRS (virtual reference station) coordinate transformation, post-processing of the data obtained.
- **Deformation of GNSS signals, atmospheric effects on RTK applications:** Causes of error, solutions, problems associated with the signals passing through the ionosphere, planning to reduce errors in measurement baselines, problems associated with different latitudes. Not GDOP (dilution of precision GPS).
- **Laser scanner and LiDAR:** Geopositioning with GPS, the measurement window and checkpoints, image for color and texture.

Dear friends and colleagues,

*I had the honor to attend the opening ceremony of this event and presented there our FIG YSN. Although I couldn't attend the whole event I still can say that this event is **writing history**. It's a good example that we get recognized, we as young professionals get the opportunity to take part in an international course, learn actual procedures skills and finally also get the opportunity to make friends internationally. For our Network it was an important event too as through such events our tides get closer to related associations and we all agree in the **benefit of working together**.*

Eva-Maria Unger



- **Photogrammetry and LiDAR systems applied to works of art and heritage buildings:** measurement planning, precision and accuracy (unlimited, depending on the distance at which the photos are taken and the operator knowledge and experience), fundamentals of measurement, fundamentals of software, production of orthophotos, LiDAR basics, camera calibration, management of point clouds and photographic images control network.
- **Photogrammetry and LiDAR:** UAV (Unmanned Aerial Vehicle) photogrammetry, laser scanner, LiDAR and urban analysis, and project photogrammetric flight project, calibration and self-calibration of cameras.
- **INSPIRE (Infrastructure for Spatial Information in Europe) and SDI (Spatial Data Infrastructure):** standard formats and rules of European geospatial data.
- **Remote sensing, GIS, SIT, georeferenced data and Global Mapping Solution** (global mapping: cloud integrated with image points, reaching accuracies of 5 cm in GIS).
- **Critical aspects of integrated systems and monitored for risk management of large landmasses movement:** Strategies, difference between movement and deformation, techniques and special instrumentation (inclinometers, high precision total stations, gauges and extensometers, GPS, laser scanner, etc).
- **Spanish Cadastre:** Structure, function and precision.

Conclusion

The course fulfilled and even exceeded the expectations of most students. Many of us were very excited about the technical information we could acquire there. What we did not expect was the knowledge that we would get in anthropological and philosophical aspects of our obligations to society and to the profession and the need to educate ourselves and evolve with this, adapting to new times. But most important was the union of the group of young professionals, who far from a junction, was based on shared experiences and memorable moments, getting to create long-lasting personal ties. Therefore, we have created a strong network between students and teachers, we all hope it will be fruitful, and when in doubt or problem that arises in our career, we contact someone who specializes in the subject matter. If to all this we add that the 12 days we were practicing English and we followed and kept in touch using the international language, I think the outcome of the course for professionals who attended is unrivaled.



Organized jointly by the International Federation of Surveyors (FIG), the Asociación de Agrimensores de Uruguay (AAU), and co-sponsored by many United Nations agencies and the World Bank.

The conference will be held in Montevideo, Uruguay- November 26th-29th at the Radisson Hotel.

The focus of the conference;

- Sustainability in the region
- Key role surveying plays in ensuring sustainable future

The conference will be structured into three days of technical program and one day of that will include a visit to a World Heritage Site, the Colonia's historic quarter.



"Surveing towards Sustainable Development"

The Social Tenure Domain Model (STDM) is a tool developed to address the tenure issues in the developing countries mainly for the rural and urban poor. As a land administration system, it has the capacity to record formal and informal land rights including overlapping claims in land. The current version is a Quantum GIS plug-in and PostgreSQL for data management.

It was developed by the Global Land Tool Network (GLTN), an alliance of over 50 global, regional and national partners contributing to poverty alleviation through land reform and improved land management and security of tenure (www.gltn.net). To facilitate its goals, GLTN has been developing a number of tools that are pro poor and gender sensitive such as STDM. The implementing partners such as FIG, World Bank, ITC, and Cities Alliance have contributed enormously in the testing, evaluation and piloting of STDM to attract a big demand globally.

It is a common phrase that everyone has a relation to land. But access and right of use for this noble resource has been restricted to a few, marginalizing the poor whose rights have not been captured in the administration system. With statistics showing that nearly 70% of the land is unregistered in the developing countries, the concern for tenure insecurity in the affected regions is overwhelming.

It is unfortunate that people living in the unregistered land don't enjoy any benefits and only live in fear of evictions; they cannot access loans or mortgages to develop it. This situation is even worsened by the fact that there are no policy shifts to offset this. Pro poor land tools such as STDM are a new way to provide a conciliatory process to gradually protract the bigger picture of envisioned land system that will be realistic, inclusive, affordable and able to record the layered rights. These approaches are not to a conclusive end in the design of land administration system but incrementally, engage the key actors and influence the process to attract a compromise towards a collaborative, institutionalized debate on continuum of land rights.

This tool is built on global standard of the larger Land Administration Domain Model (LADM) and all its databases and map data are interoperable with other land administration systems implemented at national or local levels. In a nutshell, STDM is a specialization of the Land Administration Domain Model which makes it fit for various contexts and applications for purposes of easy sharing and dissemination. Some of its powerful features include report builder and custom map output, certificate composer and charting module.

To date, GLTN and development partners continue to improve the system including the training package to make it robust enough for dissemination. The network is currently initiating a partnership agreement with FIG and various universities to review STDM and make further recommendations for improvement as it looks to test the tool further in other contexts.

By Solomon Njogu

Quick Info About...

6th Trimble Dimensions User Conference

Mirage Hotel, Las Vegas, Nevada
November 5th – 7th, 2012



2012 Dimensions Keynotes!

- Three General Sessions – Four Highly Respected Speakers
 - Gain Valuable Company Insight
 - Learn to Increase Profitability
 - Build Exceptional Leadership
 - Hear and See Extraordinary Feats of Architecture

In the December newsletter you will be able to find a report about the proceedings of the conference from Eva-Maria Unger who attended.

FIG Commission 2 Workshop

“Global Trends and Convergence in Surveying Education”
held on 26-28 September 2012 In Moscow, Russia

A FIG Commission 2 workshop took place for the first time in Russia and it was the first FIG Event held in Moscow.

The venue was Moscow State University of Geodesy and Cartography (MIIGAiK)- the center of higher surveyor education in Russia and the largest specialized educational institution of its kind in Europe.

The Opening Session began with a welcome address from FIG President **Teo CheeHai**, which was read by **Steve Frank**, FIG Commission 2 Chair.

In his welcome speech, **Steve Frank** reported about “FIG Commission 2 activities” and the main tasks of Commission 2: Survey curriculum, knowledge, learning and technique methodology and how to get more students into our wide profession. He mentioned that the cooperation with the **FIG Young Surveyors Network** is very important for solving these tasks.

Dean of Economics and Land Management Faculty, **Vladimir Golubev** – the main organizer of the workshop in Moscow welcomed everyone and announced that the workshop was available online as a Webinar and that 15 participants from different countries were registered who could ask questions and comment on the presentations and discussions. He invited all to work in common and to have good outcomes at the end.

First Vice-Rector for Educational Work of Moscow State University of Geodesy and Cartography, **Vasily Malinikov** talked about the history and perspective of surveying education in Russia, the importance of geodetic science and land survey branch for the many fields of knowledge and about the structure of university and the students who are trained. He also mentioned the very important role at international level that Russian scientists and cosmonauts play who studied at MIIGAiK, such as: Krasovskii Feodosii Nicolaevich, Izotov Alexandr Alexandrovich, Victor Petrovich Savinykh etc.

NavGeocom- the official representative of Leica Geosystems was an event co-organizer. **Elena Davydova**, congratulated in her speech the student’s team of MIIGAiK which took the first place in a national competition between the universities’ “Best Surveyors”.

The General Sponsor of the FIG Commission 2 Moscow workshop was **Trimble Navigation**.

The nice exhibition was open for two days. All participants as well as the students also had the opportunity to learn about the newest technology such as the 3D scanning VX Trimble Spatial Station and Leica’s newest GPS Receivers and some innovations from students.

Steve Frank talked in his presentation “Professional Aspects of Surveying”, about what the surveying profession means. Surveying is a learned profession involving a technical knowledge and skills, professional surveyors need to be educated in both theory and practice, professional surveyors need to be taught professional skills such as: critical thinking, problem solving, communication, social science and life-long learning.

Vladimir Golubev and **Irina Fartukova** (MIIGAiK) had a presentation about improving the quality of education through the accreditation of educational programs by FIG. It was presented as the Curriculum of Master’s Program and the information about accreditation in West Europe. The main proposal of this presentation was to develop a framework for accreditation of surveying programs by FIG Commission 2. Main aims of accreditation are the estimation of efficiency and the increasing of quality.

Liza Groenendijk, Chair-Elect of FIG Commission 2, talked about how useful students can be in developing a curriculum in land administration. She gave an example of how it is done at the University of Twente (the Netherlands). She presented a research to explore how professional knowledge develops in the academic discipline. The factors like globalization, rapid technological changes, demanding students and employees required a flexible educational base. Academic staff has to be implemented not only in teaching but also in research- and here help comes from students. They are very active in sharing their own experiences from where they come from.

Also there was an interesting presentation in the first day by **Daniel Mendoza Araiza** and **Jose de la Luz Ramirez Mendoza**, Mexico, about the “Modern Professional Profile for Geodesist” where they showed the main universities around the world which educate surveyors and which kind of diploma they get.

The excursion to the MIIGAiK Museum “Gold Rooms” taught us a lot about survey history in Russia and about techniques that they used to make the maps they created.

The second day of the workshop started with a presentation “Transforming the World’s Work” by Trimble Navigation (United Kingdom) representative, **Keith Hofgartner**. Time is change, field communications and data movement is much faster. Strategies of Trimble are to use more machine productivity, to optimize the work process, to improve the quality and to impute costs. He gave nice examples about technologies –positioning and the future development of them.

Leica Geosystems technologies for geodetic and cadastral solutions were presented by **Alexandr Yacovlev** (NAVGEOCOM, Russia). The main emphasis was paid to the 3D Scanning solutions for bridges and tunnels. A very interesting and actual topic was presented by **Tatiana Bugakova** and **Aelita Shaburova** “Networking in Education and Training” (Siberian State Academy of Geodesy, Russia). They showed by their own research how to improve the quality of teachers and competitive abilities. The modern training process in learning involves: e-distance learning, application of new methods and in consequence – education in IT technologies. They found a solution, they decided to make a training course in IT for teachers after their work, after that they tested them and gave them different levels of qualification. Four categories of qualification were identified: basic, connected with teacher specific subject, user level and interdisciplinary level. The teachers who meet the interdisciplinary level were awarded financial incentives.



Yevgeny Nikolsky posed a nice question to all of us, students and teachers: How to combine the basic knowledge (triangulation, transformation of coordinates) with the new IT technologies? We were to write our outcomes, thoughts, to write and share a memorandum.

Vasili Nilipovsky proposes to establish a special young surveyor's sub Commission 2 in Russia- which could have the direct contact with FIG Commission 2. This because they don't use the same social media as Europeans and also because English is not widely used.

Andrew Ross (Liverpool John Moores University, United Kingdom) presented "Reflections on Developing Blended Learning in Sustainability Education", about transforming the perspectives in industry and academic world and about sustainability and continuous professional development and delivering a high quality built environment. He mentioned key challenges such as: raise awareness, educate and train, identify and implement best practice, develop appropriate tools and also some key barriers such as: lack of education and training, lack of business drivers, availability and choice of sustainable products and services.

At the closing session were presented the "Resolutions" from FIG Commission 2 members Steve Frank, Liza Groenendijk, Vladimir Golubev and Irina Fartukova:

- Closer contact with universities all over the world, through internships will help to improve the quality of students
- Problem of certification and accreditation to be solved by Commission 2.
- To get more students in our profession also with help from FIG Young Surveyors Network.
- Academic Issue – To find out on fig.net about where and when a professor is needed.
- Database for education – also possible to access on fig.net
- Continuous professional development for young professionals as well as for teachers.

All Participants received a Certificate of Attendance.

On the last day in Moscow a special tour was organized: "One day in Star City". We had the opportunity to visit Orbital station "Mir", Spaceship "Soyuz" simulators, Centrifuge Ts-18 and International Space Station.

We had a lunch in Star City, where we could talk and analyze the working sessions. We also visited the Cosmonautics Museum of Star City. After that in a wonderful atmosphere, on the lake, we received souvenir certificates commemorating our visit to Star City as well as a photo of satellite as a gift.

I wish to very much thank **Irina Fartukova**, who organized everything at the highest level and also a Big Thank You to the **FIG Young Surveyors Network** for their support. In my opinion the Workshop was very successful and I believe that the ideas and requirements will be applied in the reality. In the Russian environment the work was done with a lot of love!

By Aliona Scutelnic



A football match fittingly kicked off the 6th Session of the UN-Habitat World Urban Forum, held by UN-Habitat every two years to discuss issues of urban development. Over 8,000 participants attended the event held in Napoli, Italy from the 1st -7th September, coming from over 150 countries.

Slogans of the conference proclaimed the importance of the event, with more than 50% of humanity living in towns and cities and this figure expected to increase to 70% by the next generation.

The five-day forum offered roundtables, dialogues, training events, special sessions, youth, gender and business assemblies as well as over 100 networking sessions. These were based around four focus areas:

- Urban Planning: Institutional and regulations, including the improvement of Quality of Life;
- Equality and Prosperity: Distribution of Wealth and Opportunities;
- Productive Cities: Competitive and Innovative Cities;
- Urban Mobility, Energy & Environment

In his opening speech, UN-Habitat executive Director Dr. Joan Clos said the Forum provided the agency with the perfect chance to listen to what the stakeholders had to say adding that the work of his organization was to relay back to world government what the participants wanted done.

The first day of the forum showcased the role of youth and gender. Estimate predict that as many as 60% of all urban dwellers will be under the age of 18 by 2030. Studies have further determined that while women are responsible for between 60 and 80 percent of food production in developing countries, they seldom have security of tenure, or rights to or control over land.

Key messages included acknowledge that women and youth are not homogeneous categories and that mainstreaming of successful pilot projects requires clear planning to ensure that local contexts are included. Community participation is critical – Hassan Kiberu, from the Ugandan National Federation of Slum Dwellers, stated "we need to make sure that we as experts, are communicating in the same language as the communities". Two-way discussions are more important than unidirectional transfers of knowledge. Sessions at the Youth Assembly emphasized that youth relationships with land, and do not wish to solely view and manage land as a commodity.

These messages continued across sessions on housing, sustainable growth, participatory governance, and land management. Surveying and GIM issues were particularly highlighted in a series of Global Land Tools Network events, including an overview of the Social Tenure Domain Model pilot run in Mbale, Uganda and a Roundtable "Celebrating the Recognition of a Range of Land Rights: Taking Stocks and Moving Forward". Land issues and tools, including the STDm, resonated with youth – the youth declaration from the conference highlighting the particular role of youth "in communicating, piloting and upscaling the Social Tenure Domain Model, in particular enabling community input and feedback".

Initiatives presented at the forum including the imacitychanger.org – a global movement to share and spread individual, corporate and public initiatives that improve cities. The Global Land Tools Network also launched a competition to share of youth relationships to land (open until 30 October 2012, for all those aged 18-32) – www.gltm.net .

The Youth Declaration from the Forum is available at: <http://youth21dotorg.wordpress.com/2012/09/12/youth-statement-of-the-6th-world-urban-forum-2012/>

World Urban Forum 6 website: <http://www.unhabitat.org/categories.asp?catid=672>

This article has been revised from that published in the GIM International October Edition.

Approximately 300 students accepted the invitation from the DVW and the CLGE (Council of European Geodetic Surveyors) to attend the European Students Meeting (ESM) at the INTERGEO, which was held this early October in Hannover, Germany. This meeting enables the next generation of surveyors from Austria, Belgium, Croatia, Denmark, Estonia, Germany, Greece, Moldova, the Netherlands, Serbia, Sweden and Switzerland to find out about the latest developments of international companies. It also offered them the opportunity to meet other students and discuss related topics. CLGE President Jean-Yves Pirlot and DVW President Karl-Friedrich Thöne officially welcomed the students to the Trend and Media Forum at the fairgrounds. The FIG Young Surveyors Network briefly introduced itself. The YSN treasurer Jens-André gave the presentation on the basis of Eva's latest presentations. Then Jean Yves Pirlot presented the winners of the CLGE Student Contest with their prizes. The winners also gave brief presentations on their prize-winning submissions. Winners in the category "Geodesy and topography" were Diana Bečirević, Daria Dragčević, Jakov Maganić, Kristina Opatić, Ljerka Županović from Croatia with their work "Geodetic Works In Research And Development Plan For Remediation Of Landslides Kostanjek". The winner in category "GIS and mapping" was Constantin Gisca from Moldova with his work "Impact Of Persistent Organic Pollutants On Human Health and Analysis Of The Damage Caused By Them By Using GIS Tools." You can find their submitted papers on the CLGE website: www.clge.eu/news/index/78. Following its debut in Karlsruhe in 2009, this was the second ESM. The participants also had the chance to join the Students Party at Trimble's stand.

By Jens-Andre Paffenholz



Editors Report

Hello Everyone,

I have had the pleasure of being the one to organize and put together the November 2012 Issue of the YSN Newsletter. It's been a fun time being able to read some of the stories which were submitted for the issue, and I hope you all enjoy them as much as I do. I would like to invite you all to submit an article for future issues. The articles could be anything that you want with relationship to surveying. It could be about your vacation and visiting surveying groups, on your trip too what you did at your place of education or work. It's a great way to show others from our profession what you are doing. I look forward to see what is in store for the next month or so that we can read about in the next newsletter.

Respectfully,
Daniel Helmricks

FIG YSN Newsletter Editor
US Regional Representative

A Young Surveyors Association in Ethiopia can be used as a tool to address Ethiopian Planned GTP and MDGs, argues Eskedar Endashaw, academic staff from the Institute of Land Administration, Bahir Dar University and an Ethiopian contributor to the FIG Young Surveyors Network newsletter.

Eskedar Birhan was born in 1988 and grew up in the capital city of Ethiopia, Addis Ababa. She graduated with a BSc in Land Administration from Bahir Dar University in July 2011. Since her graduation the university employed her as an Assistant Graduate in the Institute of Land Administration. She still lives in Bahir Dar and works at Bahir Dar University.

She argues that the experience and knowledge she has gained from the university and from the African Task Force workshop held in Cape Town, South Africa and the FIG working week held in Rome, Italy, 2012, in one way or another has given her the chance to appreciate the virtue of creating network in the process of building a Young Surveyors Association.

Due to the current status in Ethiopia, she mentioned that, despite increasing demand for the surveying profession it has not received much attention from the government since most of the professional work has been done by individuals who graduated from related disciplines. On the other hand, she stressed that contribution of surveyors in achieving UN Millennium Development Goals (MDGs) of Ethiopia as change agents are significant. Currently, it appears that education system of Ethiopia has attracted interested students in practice oriented disciplines. In this view, the number of graduated students in surveying at least at BSc level is increasing, yet does not satisfy the demand. Based on experiences, however, she feels that there is a need to go beyond certain simplistic notions of increasing number of professions.

Hence, young surveyors' network experience has meant a lot for her in appreciating the objective of FIG YSN and African Task Force in terms of having associations. It has to be stressed, however, that despite, both the government and professionals are largely ignorant of the contribution of young professional associations, the experiences and her inspiration made her confident that it is possible to create networking and can contribute a lot for an Ethiopian young surveyor association.

To emphasize the relevance of networking she described the main purpose of the FIG African Task Force is to create surveying professional association that enables the professions in Sub Saharan Africa to deal with social responsibility in terms of how to contribute to achieve the MDGs through engagements of poverty alleviation, economic growth, and environmental sustainability. Thus, she believes that for learning and teaching, to be very interesting and an exciting, there should be an association that has a solid understanding supported by a strong academic foundation because it gives professionals valuable experience as well as satisfaction of hard work.

In her view, anticipating likely establishment and creating network in a developing country where facilities for communication is challenging, yet building scenario on how to create networking is the only way to adequately form large professional associations. Thus, based on the insights from such visionary views and taking all the experiences she got from FIG YSN, and particularly considering the message of the Chair, Kate Fairlie, she has already started to create Ethiopian young surveyors network in Bahir Dar city where she has been working and the main office of the association under the umbrella of Ethiopian Land Administration Professional Association. She stated with confidence that in the short and long run, the Ethiopian young surveyors' network will do a lot of professional works that significantly contribute for achieving Ethiopian GTP and MDGs and show how profession can bring change in our world.

Eskedar hold plans regarding how she aspires to make use of the association at national and Africa level. Actually her target would be set up expansion of the already created networks for the establishment of young surveyor association at country level and then to link with surveying professional association in Sub Saharan Africa. Thus, with the help of colleagues, she has a plan to establish a main association office center at national level. By doing this, she plan to take the initiative to motivate the association to fulfill its commitment according to objective of FIG YSN and African task force.

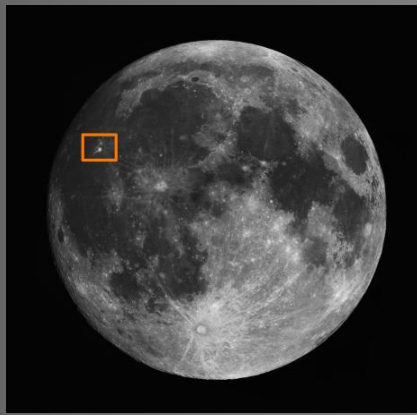
Ed's Note: Eskedar Birhan is looking forward to readers of this newsletter to advise and share their experiences on how her dream initiated by FIG YSN and African task force would be come to true . Eskedar can be reached at eskedarm@hotmail.com



Geological Mapping of the Moon

Eng. Ordóñez Etxebarria has recently completed studies in Engineering in Surveying, with the presentation of the Thesis "Geological Mapping of the Moon."

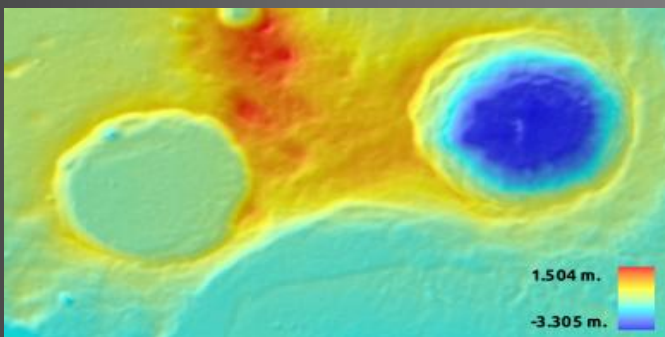
This project has basically been the application of remote sensing techniques on data captured by different lunar missions, the ultimate goal for editing a document with information on mineralogical mapping of the lunar surface.



The main task is to analyze remote sensing data volume coming from observation satellites that are orbiting around our planet, and apply to that analysis the most suitable methodology to achieve the desired results. However, this project is located in another area than commonly used in the application of remote sensing methods. Here we study the Earth's surface to study the lunar surface making use of the images of the different satellites that orbit the Moon. No wonder that the different space agencies understand remote sensing as a discipline preferably in their research, and are using these techniques to expand their knowledge of the various solar system bodies. Probes are sent and process information not only on the moon but the surfaces and atmospheres of Mercury, Venus, Mars, Jupiter and Saturn among other celestial bodies.

Even recently we are beginning to evaluate remote sensing as a technique to consider in the study of extrasolar planets, evaluating the light spectrum and comparing them with reflected by our planet. In this case, the practical part of this project has focused on surveying and geological area of the Moon visible in the southern region of the crater Aristarchus, specifically in coordinates 22 ° N, 49 ° W of our satellite. The zone covers an area of about 10,000 km² and is located inside the crater Aristarchus near which one of the lunar regions which has greater diversity of geological materials. To undertake the project has been a need for lunar images obtained by observing different satellites that orbit the Moon. The analysis and evaluation of these images allowed us to have the necessary information on topographic and geological features to integrate both into one final map. While we have found some difficulties in regard to image processing and cartographic treatment of these parameters using moles, roughly, it can be said that there are more similarities than differences in land remote sensing project.

Once these technical complexities have been eliminated the final result of the project has resulted in the best resolution geological mapping (1/350.000) to date of the Aristarchus plateau region, at least as far as is known. Moreover, and as to the classification of geological materials is concerned, this study also can be attributed high reliability when compared qualitatively the results with other similar research.



Methodology

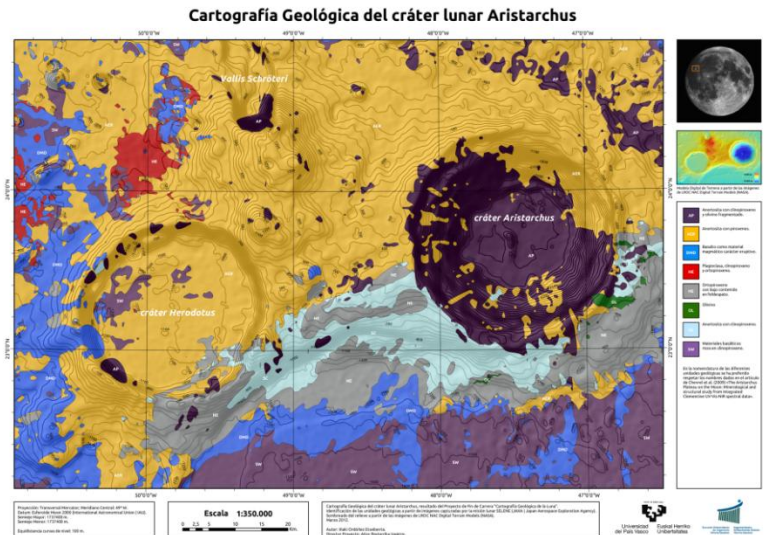
The starting point of the project focused on the search and synthesis of satellite imagery of different lunar missions that might contain relevant mapping and geological information. Once identified by using remote sensing techniques they were able to extract the relevant information from these images for the development of the geological map. Specifically, for the realization of the map of the area under study, necessary information was found from missions by NASA and the Japan Aerospace Exploration Agency (JAXA). Primarily, research has used the images captured by the Japanese SELENE mission to obtain information necessary for the preparation of the geological map. The images of 62 meters per pixel spatial resolution obtained by this probe are sensitive to visible and near infrared range of the electromagnetic spectrum and with this study was able to obtain the classification of materials eventually integrated into the geological map of the area. These images have been applied a supervised classification by maximum likelihood, using as training polygons results of spectral analysis performed for the same region by several research teams.

In conclusion, despite not having the ability to perform field work, thanks to the characteristics of the lunar surface (types of materials, lack of vegetation and atmosphere, ...) it has been possible to mineralogically map them independently of this preliminary fieldwork. This detail represents a fundamental difference with the development process of terrestrial geological mapping is mainly based on soil samples and geological tastings. It should be noted also, the number of probes and sensors that have been sent to the Moon, have provided very different from the characteristics. By the investigation of lunar features, including its involvement of remote sensing within this research, a priority is taken into account by the various space agencies. In this regard, most of these are public institutions and available to all, much of the data has been collected from missions. This item opens the possibility to study and research of the characteristics of the Moon, in which the participation of the topography may have a significant presence. This is one area that just so fascinating that it is worth probing.

If someone wants to expand more on the specifics of this project they can contact me.

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This summer I had the opportunity to go to the USA and to stay there for one month. My purpose was to visit the USA and to meet American surveyors that had accepted to give me the opportunity to visit some companies.

WHO HELPED ME AND HOW?

Before my trip I remembered that during last FIG working week in 2012 in Rome, I met Mr. John Hohol, president of FIG Foundation, and that he was my friend's Facebook friend. I told him, about my plans to go to the USA (Philadelphia) for one month and that I would be very happy to meet some surveyors or visit some companies. He liked my idea, and promised to give me some contacts. Via e-mail he introduced me to two American surveyors who live and work in Philadelphia. I received their positive feedback immediately.

During my holidays in USA I met two surveyors, Mr. Frank Lenik, Direct Sales Representative of Leica Geosystems and Mr. Shaeed A. Smith, Survey Division Manager of Pennoni Associates Inc.



In my first week when I met, Mr. Frank Lenik, I visited two companies, the office of Karins and Associates, where they explained me the company's main jobs, and showed me a laser scanner in action in the field.

Then I visited the Keystone Aerial Surveys, company that works in different states of USA, and they are specialized in aerial photogrammetry.

I saw there the office and the airplane with the camera. I met the vice president Mr. John Schmitt. He told me that they work with the government and that they were the only company that two days after September 11th was allowed to fly up above New York City. He explained for me the characteristics of their airplane and of the camera inside it.

During the second week, I met Mr. Smith who showed me the office of Pennoni Associates. Mr. Smith invited me to the monthly meeting of Pennsylvania's surveyors. It was great experience and opportunity to meet other very friendly surveyors. I had great time talking to them and listening to their arguments about surveyors and about next meeting. I had the opportunity to introduce myself and to explain my desire to meet other surveyors.



WHAT ARE THE DIFFERENCES BETWEEN AMERICAN SURVEYORS AND ITALIAN SURVEYORS?

During my experience I saw differences between American Surveyors and Italian Surveyors.

The first difference is that in the USA the law is different for each State.

After school surveyors can decide to do the internship for 7 years and after take an exam for the habilitation or they can choose to attend a technical school and then at the university. In Italy it's very similar, after the secondary school we attend technical school for five years, and then we have a choice to work in the private office, company or at the university for 3 years. **(NOTE: Education/experience requirements are different for each of the 50 US states)**

First of all they work with topography, they are a land surveyors and a lot of them work for the company.

Another difference is the metric system. They use inch and foot in the USA. **(NOTE: For cadastral/boundary surveys – the metric system is used for geodetic surveys)**

In conclusion, it was exceptional experience not only because I visited USA but also because I had the opportunity to meet new friends, new surveyors. I had also the opportunity to see friends I met in the FIG Working Week. I would like to call the young surveyors attention and: stay in touch with each other and share information on the social networks.

I would like to say thank you again to Mr. John Hohol, for this experience. During my holidays he was always in touch with me checking for possible problems, news and updates from his friends. I would also like to say thank you to my new friends Mr. Frank Lenik and Shaeed A. Smith who gave me the opportunity to see how the American Surveyors work.

Daniele BRANCATO



Topics to Come in December Newsletter!

- Trimble Dimensions User Conference Report
- Notes from:
 - ESRI
 - Trimble
 - Leica
- Albanian Young Surveyors
- A Summer Day on the Fairweather (Hydrographic Surveying)
- ATF Event in Accra

These are just a few of the topics planned for the December Newsletter.