

Under-represented Groups in Surveying

**NEWSLETTER NO. 4/06
JOINT COMMISSION WORKING GROUP
ON UNDER-REPRESENTED GROUPS IN SURVEYING**

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**FIG Congress 2006 in Munich Germany, 8-13 October 2006
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On Sunday the General Assembly endorsed the FIG policy paper on enhancing the representation of under-represented groups in FIG and to use its recommendations as guidelines when preparing FIG policies and events. This document is available as publication Nr. 35 here: <http://www.fig.net/pub/figpub/pub35/figpub35.htm>

The minutes of the General Assemble are available on <http://www.fig.net/admin/ga/2006/minutes.htm>

The FIG policy paper on enhancing the representation of under-represented groups in FIG was topic 17 on the agenda.

Now all institutions of FIG have to deal with this topic and it is no more only the task of a working group. I proceed from the assumption that the Council will observe the implementation and that all members of the network will keep an eye on it. Many thanks again for all the contributions and the support I got. This publication highlights the end of my activities for FIG and the German association DVW after nine interesting and enriching years. I am very grateful for the financial and personal support of DVW and the opportunity to be a member and during the last 4 years the chair the German Study Group 1 "Profession". In the meantime I left the Surveying profession and it is part of our DVW-regulations that after 8 years there should be a change. For the network was so successful I hope that someone will take over the Newsletter. An editor is needed to ask for articles, to coordinate and to bring together the edited articles in one document. I got the confirmation from FIG Director Markku Villikka that the FIG Office will handle the mailing list and the publication on the FIG home page.



During the FIG Congress 2006 in Munich Germany, the Working Group got the opportunity to present papers during the session “Under-represented Groups and Ethics”. This session was chaired by Mr. Ken Allred, Vice President of FIG (Canada).

After an interesting presentation from Mr. Haim Srebro (Israel) about Professional Practice Based on Education, Ethics and Standards we had 3 excellent gender based presentations from Ms. Jennifer Maldar (Germany) “Let's Talk about Us!”, Mrs. Angela Etuonovbe (Nigeria) “Improving Participation of Under-represented Groups – Projecting the Image of the Nigerian Female Surveyor” and Ms. Gerda Schennach (Austria) “Gender Issues for Land Registration and Professional Qualification”. They highlighted, among other subject, the importance of networking. Summaries of the papers from Angela Etuonovbe and Jennifer Maldar are published with this Newsletter. For me it was a pleasure to present publication Nr. 35: Enhancing the Representation of Under-represented Groups in FIG.

Women who are Leaders in the GPS Industry **By Wendy J. Woodbury Straight, L.S., USA**

Among 56 industry leaders featured in the May, 2006 issue of GPS World magazine were **Elizabeth Cannon** and **Penina Axelrad**, both of whom are well known to those who support the recruitment of women into the surveying and mapping fields.

Cited by GPS World for their technical research within the GPS industry, Cannon and Axelrad are both well known educators. Cannon is a professor and department head in Geomatics Engineering at the Schulich School of Engineering of the University of Calgary, Canada. Axelrad is a professor and associate chair in Aerospace Engineering Sciences at the Colorado Center for Astrodynamics Research of the University of Colorado, USA.

Cannon has actively recruited new graduate students at Calgary, which is a key source for highly trained GPS/GNSS specialists. The focus of her own research is currently vehicle positioning systems that integrate GPS with low-cost inertial systems and dead-reckoning sensors, including the analysis of the new GPS and Galileo signals for use in precise positioning.

Axelrad teaches satellite navigation and is involved with multidisciplinary research teams. Also, in an outreach effort for the science education of children in Kindergarten through Grade 12, she has used GNSS to strengthen math and engineering skills at those age levels. Axelrad’s technical research explores the uses of GPS bistatic radar to augment aircraft safety and make scientific measurements of the Earth from airborne platforms.

Among other women joining Cannon and Axelrad in GPS World’s list of industry leaders were **Karen Van Dyke, Ann Ciganer, Diane Cornish, Carolyn P. McDonald, and**

Marie Lage. Van Dyke is a technical expert for GPS at the RITA/Volpe Center of the U.S. Department of Transportation, where she helps coordinate GPS research at all levels of the organization. Ciganer is an executive director for the U.S. GPS Industry Council and a vice president of Strategic Policy at Trimble, serving in both capacities as an advocate for all GPS issues.

Cornish is the Director of Navigation Programs for Lockheed Martin Integrated Systems and Solutions, where she leads a team with deep GPS expertise and also explores the partnerships for interoperability solutions between GPS and Galileo. McDonald is President of NavtechGPS and has been instrumental in GPS/GNSS educational services, with plans for E-learning and for a partnership with a European organization to present training courses for the industry.

Lage is the owner of Dynamic Analytical Solutions, supporting NavAir in the development of the U.S. Navy systems, and serving as chief engineer for the demonstration of automated aerial refuelling for application to unmanned aerial vehicles. GPS World noted that these seven women, together with the 49 men chosen for the leadership feature, represent persons in the navigation field who continuously strive to extend the industry's research initiatives. GPS World is a trade journal published monthly by the Questex Media Group, Inc. of Newton, MA, USA.

Wendy J.W. Straight; Professional Land Surveyor, USA; E-mail: wendy@netsync.net



Improving Participation of Under-represented Group: Projecting the Image of the Nigerian Female Surveyor By Angela Kesiena Etuonovbe LSM., Nigeria

Introduction

Every community of persons has a potential for conflict. In other words every community of persons suffers a capacity for conflict. Selfless disposition makes for a more potentially purposeful and united community. It is the absence of this posture in the community that we find domination, intimidation, competition, frustration and retaliation among the sexes. This in no small way, causes much unhappiness and dissatisfaction in the polity. Unfortunately the woman is

the most hit.

Surveyors Education/Training

The Training does not segregate among sexes. It as much as possible encourage both sexes male and female into the profession. What happens after graduation? This is stage where some females are singled out as incapable for the job requirements.

Women – In – Surveying (WIS)

An umbrella organization under the Nigerian Institution of Surveyors for women (NIS). Its mission is that women shall form at least 30% of the total membership of the NIS, and actively participate in all NIS programmes.

Prior to WIS, female surveyors constitutes only 3% of the total membership of NIS and are hardly seen to participate in the affairs of the institution (NIS). With the establishment of WIS participation has increased from 3% to 8%. This figure still poor, Women–In–Surveying still have a lot to do to achieve their vision.

Amongst others WIS intends to:-

- Organize workshops/Seminar to create awareness in the profession for the young ladies at every Annual General Meeting (AGM) of NIS in the hosting region and zones.
- Massively mobilize women graduating from higher institutions as surveyors to register as members of NIS and WIS.
- Encourage more women to attempt the surveyors Council of Nigerian (SURCON) Examination and aspire to get registered.
- Encourage more women to venture into private practice.
- Formulate and cause to be implemented ideas and policies that will improve the image of the female surveyor.
- Cause to be established a special scholarship fund for young girls who are reading Surveys and Geometrics in our institution of higher learning.

Problems and Challenges of the Nigerian Female Surveyors

- Outright discrimination (during interviews for employment as well as depriving them from field work).
- The inability to differentiate between their status duties and their working responsibilities (they are regarded as a weaker sex).
- Sheer laziness and indifferences of some class of women.
- Lack of knowledge about survey, how it operates and what it has to offer. (Many Nigerian female surveyors did not have prior knowledge of what surveying was).

Tips on the Usefulness of a Female Surveyor

- Proficient in resolving Disputes (Litigation Survey)
- Good Conflict Managers (Strong Bargaining powers)
- The needed care of diligence the profession entails

The Way Forward

- Education (enhances the quality and standard of life of every citizen regardless of gender).

- Continuous Enlightenment and Mobilization (follow-up actions to all regional workshops in order to actualize the goals of WIS.
- Removing self imposed barriers – what a man can do a woman can do better.
- Image improvement-to be the best for the enhancement of the profession.
- Encouragement – everyone needs this to excel in life.

Conclusion and Recommendations

I have no doubt in my mind that the on going effort to redress the situation of gender inequality in our system is a positive development. The removal of gender discrimination in the rules and regulations and policies in the Civil Service in Nigeria will no doubt help develop the potentials of women to put in their best in their chosen field of human Endeavour.

Surveying is an important aspect of human development. The Nigerian Institution of Surveyors has created an enabling environment for the participation of Women-In-Surveying. This could be used in achieving the aim of the Nigerian female surveyors.

When you are a woman in a male-dominated industry, you have to carve a niche for yourself in order to succeed. You do not have to behave as if you are a man or have to imitate your male counterpart. You have to be yourself, and be the woman you are. When you do this, the sky will be your limit.

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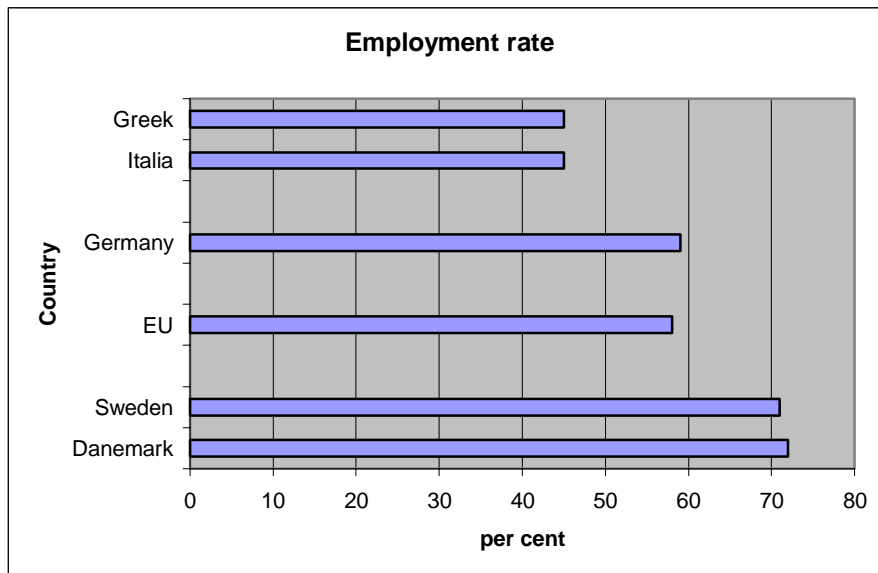
What's going on in Germany? Or Let' talk about us? By Jennifer Maldar, Germany;

In a booklet of the German statistic government „Women in Germany 2006“, is following written:

In the European Union (EU) Germany lies in a mid of the employed rate of the active women (59%), the age is between 15 and 64 Years. The best countries are Denmark with 72%, Sweden with 71% and the lowest are Italian and Greek with 45%. In Germany the employment rate of activity and committed women are in March 2004 around 45%, that's 16 Million from overall 35.7 Million People who lives in Germany. 42% there work less than a full working

day. In our technical professional circles less than 10% of women get the chance to for an apprenticeship. A technical Scholastic, an example a construction engineer there started with 21% of women. How can we make it interesting for women to start a technical profession and how can we get more power to stay? There are many possible ways in doing that. One way is the support through organisations from outside. For an example: through the EU-Politic, every country has its own associations and clubs. To

get in contact with them is easier as you think, thankful to the modern technology and ways of communication.



In the EU-Politic there is since 1997 a concept, that's called „Gender Mainstreaming“ and is in the Amsterdam-contract arranged and motivated through the 4. World-Women-Conference in Peking 1995. Gender Mainstreaming is for equal opportunities between women and men in our society and assist or make something clear for someone else. Efficient clear questions and cost benefit analysis could make the discrimination smaller. In the German Basic fundamental law the “Grundgesetz” in article 3, section 2, clause 1, “Men and Women are equal”. Particularly with regards to the emancipation, it's not only and specificity for women. About statistics and analysis in healthcare, mobility, career choice and so on. There will be equal opportunities in all these spaces.

At the last InterGeo (2005) in Stuttgart /Germany, the Working Group “Women in Surveying” has started a poll. Only 50% of all participants have heard from Gender Mainstreaming and only 63% of these 50 % could find an example at their work. The most answers of content with activities were the city / town planning or law changing. Isn't it awful to see, that nobody knows of it although it's been there for 10 years. That's a big deficit of information and knowledge of our life with and between us. Gender Mainstreaming will be bewareing for discrimination, but also the old and disabled people play a big role in that theme. An example: What about pavements? Isn't it difficult for old people, a mother with a baby carriage or a disabled person in a wheelchair to get on or off, the pavement when it's not flush with the ground. There wasn't a little chance for these people to change the side of the street. The same goes for busses. In Germany we now have often low-floor vehicles.

The international experiences within the FIG (International Federation of Surveyors) and the Task Force and than Working Group of “Under-Represented Groups” gave a big impulse for the “Women in Surveying” in Germany, especially through by my colleague Mrs. Gabriele Dasse as chair of the FIG Working Work and her engagement in our German association and network. The FIG “Newsletter” is one of the communication

platforms, which is a service for all interested people. On the FIG-Congress 1983 in Sofia / Bulgaria there was a Group created with the title "Women in Surveying". That was the reason to start the same in Germany. It was a long journey, but now we are established.

The DVW is one of several German associations for Surveyors. The DVW is the „Deutscher Verein für Vermessungswesen“. It was established in 1872. In 1989, on an annual national meeting of the Surveyors in Stuttgart, the DVW has opened a new female group with the name of „Women in Surveying“. In 1995 the Group grew up to an own Working Group, the AG FiV (Arbeitsgemeinschaft Frauen im Vermessungswesen). Since then, the Group supports all activities around the female surveyors. In 2002 the women in Surveying are now an official Part of the Working Group 1 "Profession". A special target of the women from the DVW is aimed in theory, technical and practical activities in the area of Geodesy, Geoinformation and Landmanagement to give information and support. As well the federation between other clubs or associations is one of the targets of the women in Surveying. In Workshops we create polls and later the results will be evaluated, please look at our poll of the Gender Mainstreaming. On panel discussions and presentations, were highlighted during the last years „Reform of the Curriculum at Universities“, „How to establish an Enterprise“ or „Profession in Change“. That was presented on the InterGeo, a national annual congress in Germany. In the frame of the presentation on the InterGeo the women in surveying have their own booth on the fair. There is a meeting point for everybody, who have fun to talk with each other, to collect or exchange names, addresses, information about new jobs or tips and tricks.

The network of the women in Surveying from the DVW, has their activities in the last few years remarkably increased, one of the reasons is the biggest technology step of the world – the Internet. Well, the network is the oldest connection for humanity. Latest the mediaeval times the male doing was so narrow, because the international trading operation was really fluent. Today it looks a little bit different. The men are who meet together in a pub or restaurant on a regular's table, the international round table conference, that was the fix point to get in action, to dispute, to take deals together and handshake for other business contracts. The Women have recognized that, and they do the same, but not on that level. The women's network applies only to the small circle of the family and the immediate neighbours – only for the social network around her and the family.

We haven't recognized the dimension of the network of men for a long time, but now we are coming! The women in Surveying are a very good mixed fine group. We have all professions in our network (trainees, technicians, engineers and professors), over all ages and all are motivated to support everybody.

Our YAHOO-Group, is a quick and a smooth platform for communication in our actual life. Most of us around the world have an access to the internet, so it's possible for everyone to get in contact. With that internet operator everybody of the group is flexible, worldwide accessible and if you want, to change every kind of information. The moderation Forum is a quick and uncomplicated exchange of practise and knowledge of profession information and diverse more.



Via public relations more tips, tricks and every kind of information for all members can be exchanged or you get in contact with a person when you want to share your information. We are since the Internet-Group started, around 41 registered members and we are growing further. Over the Internet-Forum an annual working weekend will be organized in Germany. In the last years we met in Fulda. On that meeting in Fulda, we develop seminars, special speech themes and working papers. It's really special for women and newcomers. You can find the women in

Surveying of the DVW under the link www.dvw.de/frauen or http://de.groups.yahoo.com/group/frauen_im_dvw see and read more about there activities (only in German). Besides this annual meeting in Fulda, there's a female regular's table. They meet twice or more a year and sometimes they organize seminars for themselves. The women are getting a multiple function, so the network lives. Women are so full of power and energy, that they must use it to support the younger professionals. They need our help, because the men dominate our big technical surveyor world. Every woman, if she is either young or old, stays in a job and is near the top or stays at the beginning of the career, has with that YAHOO-Group a big partner on her side.

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California State Lands Commission By Kelly Olin, USA



The California State Lands Commission (CSLC) dates back to the original California State Surveyor General's office. In 1929 the Office of the State Surveyor General and the Department of State Lands was consolidated inside the Department of Finance and in 1938, pursuant to the State Lands Act of 1938, the legislature created the State Lands Commission. The Commission is made up of three commissioners being the Lieutenant Governor, the State Controller, and the State Director of Finance.

The mission of the CSLC is to protect and manage the sovereign lands of the State of California for the people of the State of California. The mission statement reads:

The California State Lands Commission serves the people of California by providing stewardship of the lands, waterways, and resources entrusted to its care through economic development, protection, preservation, and restoration

The State acquired sovereign ownership of all tidelands and submerged lands and beds of navigable waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all the people of the State for statewide Public Trust purposes which include waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. The landward boundaries of the State's sovereign interests in areas that are subject to tidal action are generally based upon the ordinary high water marks of these waterways as they last naturally existed. In non-tidal navigable waterways, the State holds a fee ownership in the bed of the waterway between the two ordinary low water marks as they last naturally existed. The entire non-tidal navigable waterway between the ordinary high water marks is subject to the Public Trust Easement. Both the easement and fee-owned lands are under the jurisdiction of the State Lands Commission. The locations of the ordinary high and low water marks are often related to the last natural conditions of the river, and may not be apparent from a present day site inspection.

The Commission has exclusive jurisdiction over all unpatented tide lands and submerged lands owned by the State and the beds of navigable rivers, streams and lakes. Since statehood, much of this land has been granted in trust to municipalities and is used by many for Port purposes. California also received a grant of the swamp and overflowed lands within the State. These lands were patented into private ownership for the purpose of reclamation and cultivation. Again, due to the overwhelming task of identifying the character of these lands by county surveyors and the influx of purchasers into California as a result of the discovery of gold, not all land of this character was apparent then or now.

The Surveying staff of the Commission works within the Civil Service class of Boundary Determination Officer. The entry level classification is known as a Boundary Determination Technician and requires a minimum of six units of course work in surveying or a four year degree in a related field. The Assistant level requires a Land Surveyor in Training Certificate and the Associate level a California Professional Land Surveyor's License. The more difficult work is done by Senior Boundary Officers and the group is managed by a Supervising Boundary Determination Officer.

Frequently the CSLC is called upon to settle a title dispute over a parcel of land, often at the beginning of potential development. A dispute is often best resolved via a title settlement agreement or possibly a quiet title action. The Boundary Determination Officer researches the facts of the case using available historic records, maps, photographs, and field notes. He or she also views historic topographic and hydrographic surveys to establish the original physical limits of the public trust lands. Once the extent of sovereign land is determined the Boundary Officer works with an appraiser and attorney to determine the value of the potential claim.

If a dispute results in litigation, the Attorney General's office acts as the litigator on behalf of the agency. More often the emphasis is to negotiate a settlement with the

opposing party using either a Boundary Line Agreement or an Exchange Agreement, which will allow use or development of the lands in question while protecting the public trust interest. The settlement allows the sovereign interest in a parcel no longer useful for trust purposes to be exchange for a parcel of equal or greater value with potential trust value, or allows funds to be put into the Kapilof Land Bank for future purchase of lands that would be useful for trust purposes. The Boundary Officer is then called upon to prepare land descriptions and plats and possibly survey the settlement parcels for the transaction.

The CSLC is the repository for all the records of the California State Surveyor General's office as well as the Board of Tideland Commissioners (BTLC). The surveyor, George Allardt, hired by the BTLC to survey the tide and marsh lands in San Francisco Bay, date back to the 1860's. The CSLC has Allardt's original field books and also all of the maps showing the salt marsh and tidelands in the San Francisco Bay. The agency also has original swamp land surveys and tideland surveys and much of the historical Hydrographic and Topographic Surveys of the California Coast. Included in the library is an index of aerial photography, representing in-house copies of photography dating back to 1928 and information on photography kept elsewhere by other agencies.

Over the years the Boundary staff of the Commission has been reduced by approximately 80%. With the ever increasing demands on California's resources, the task of responsibly managing these lands has become challenging. Water boundaries are a unique field in the surveying profession and the amount of time required to learn the specialty is approximately 5 years. Given the reduction in the number of licensed surveyors and the past salary discrepancies, hiring has been a challenge. Many of the "old timers" have retired and the institutional knowledge has been lost. It is not unlike many of our contemporary surveying companies, where the practice of mentoring and learning the "art" of surveying is going by the wayside.

Kelly Olin, P.L.S. 5166 recently retired as the Supervising Boundary Determination Officer for the California State Lands Commission. Her career included 29 years at the Commission in which she held all of the positions within the Boundary Classification. She is an active member of ACSM and currently serves as the Chair of the CARE Committee. She received her Certificate in Surveying, AA Degree from Sacramento City College, and has a Degree in Public Administration from the University of San Francisco.

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