

The ISPRS Foundation Requests Your Support

**Assistance to the Photogrammetry, Remote Sensing and
Spatial Information Sciences**

Annual Report 2011



The ISPRS Foundation at a Glance

The ISPRS Foundation is an independently registered philanthropic entity that has been established SOLELY for providing financial assistance to advance the benevolent purposes of the International Society for Photogrammetry and Remote Sensing (ISPRS), an international, non-profit, non-governmental organization (NGO) composed of more than 181 societies and organizations from more than 120 countries. The Foundation is designed to provide a variety of grants annually and is enabled to foster linked relationships with other foundations and trusts established in the ISPRS Member countries and regions for sustaining international sharing for the common good of the sciences, technologies and disciplines represented by the ISPRS. The Foundation is required to spend less than 2% of donated funds for its administrative costs. At least 98% of every donation goes to grantees!

The ISPRS Council annually assesses needs and submits requests for support to The ISPRS Foundation. Based on availability of funds, The Foundation Trustees qualify the merits of the requests and are the approval authority. Multinational committees (no more than two committee members may be of the same nationality) support the Trustees in evaluating the requests.

To fulfill its aim, The ISPRS Foundation raises, invests and grants funds to provide assistance to qualified individuals and organizations around the world.

The ISPRS Foundation programs benefit the international community by enabling improved education, training and tools to be shared with the less privileged, especially those in emerging markets and regions. In addition to recognizing and rewarding outstanding candidates and achievements, The Foundation promotes and facilitates international cooperation and collaboration by supporting research initiatives for advancing the capabilities and beneficial applications of the sciences, technologies and disciplines of the photogrammetry, remote sensing and spatial information sciences.

Contents

The ISPRS Foundation at a Glance.....	1
Message from the Chairman Board of Trustees.....	3
The ISPRS Foundation Annual Report – A Brief Overview	4
New Trustees Appointed in 2011	6
The ISPRS Science Initiative 1: A comprehensive, on-line terrestrial laser scanning bibliography.....	8
The ISPRS Science Initiative 2: The ISPRS Blog	10
The Report Section 1: 6th ISPRS Student Consortium and WG VI/5 Summer School.....	11
The Report Section 2: Workshop “Commercial Satellite Imagery Project to support UNEP’s National Environmental Atlases and UN HABITAT’s Lake Victoria Urbanisation Initiative”	14
The Report Section 3: The ISRSE 34 Symposium	16
Financial Overview 2011	17
The Trustees of The ISPRS Foundation.....	18

Message from the Chairman Board of Trustees



Serving a foundation is always an honour and a pleasure. The ISPRS Foundation (TIF) was established during the ISPRS Congress in Istanbul and since then is active to provide financial assistance for ISPRS affairs. In comparison with other international foundations it is still young and therefore our financial resources are limited. But so far TIF has successfully managed to increase fund raising and to provide grants to assist qualified individuals and organizations around the world.

The Annual Report 2011 is a first comprehensive issue as compared to the reports given previously. We would like to share the positive feedback of the ISPRS scientists and grantees with you, our longtime sponsors of the past and in future. But we are in need of more donations from individuals, institutions and companies. May this report encourage you to continue your efforts in philanthropic issues, especially for the benefit of Photogrammetry, Remote Sensing and Spatial Information Science. Every donation is highly appreciated.

Dieter Fritsch

Stuttgart, July 2012

The ISPRS Foundation Annual Report – A Brief Overview

By Dieter Fritsch, John Trinder, Larry Fritz and Marguerite Madden

1. Introduction

Welcome to the Annual Report of The ISPRS Foundation for 2011. The ISPRS Foundation was inaugurated during the ISPRS Congress in Istanbul, Turkey in July 2004 and thus has been in operation for more than 7 years. The major achievements of the Foundation over this period have included:

- Received more than \$US210,000 in donations and grants that are being used to support The ISPRS Foundation funding activities
- Received large donations of up to \$US25,000 from major spatial information companies; The Foundation continues to receive regular sizable grants from the commercial sector.
- Is supported by leading representatives from academia, government and business in the spatial information industry as Trustees of the Foundation Board.
- Provided grants to more than 50 individuals from developing countries in Africa, Asia and Latin America to attend workshops and conferences to improve their knowledge and skills in spatial information sciences
- Funded prizes for CATCON (Computer Aided Teaching Contest) events in 2006, 2008 and 2012 to encourage the development of freely available software for teaching in spatial information processing and management.
- Funded major awards in 2008 and 2012 for outstanding performance by an individual in the spatial information sciences
- Provided grants for Science Initiatives.

2. Board of Trustees

The Board of Trustees comprises 11 members as listed in the last page of this report. The Board thanks Hans Hess (Switzerland), Abigun Abiodun (Nigeria and USA), and Martien Molenaar (The Netherlands) for their contributions to the Board and The ISPRS Foundation over the period of 7 years since the commencement of the Foundation. In their place the Board welcomes:

- Dr. Marguerite Madden, who is Professor and Director Center for Remote Sensing and Mapping Science (CRMS), University of Georgia, Athens, Georgia (USA)
- Dr. Mazlan Othman, who is Director of the UN Office for Outer Space Affairs (UN-OOSA), in Vienna Austria
- Lewis Graham, President and CTO, GeoCue, Madison AL USA

The new Board members are excellent additions to the Board and will play an important role in guiding the Board for the next 3 years.

3. Officer Bearers

Lawrence Fritz stood down as Finance Officer in 2011 after more than 4 years of excellent service to the Foundation. Marguerite Madden has assumed the position of Finance Officer under the continued guidance of Lawrence Fritz. The positions of Chair and Operations Officer remain unchanged.

4. Activities for 2011

Funding is made available each year for activities recommended by ISPRS Council and approved by the Board of Trustees. The level of funding is defined by the Annual Amount by a formula in the Bylaws as follows:

...the Annual Amount shall not be less than the net income earned by the principal in the preceding year, but in all events the Annual Amount shall never exceed twenty percent (20%) of the average of the net (principal, earnings, excess and deposits, less administrative expenses and grants) fair market value of the principal for each of the three (3) preceding calendar years.

The amount allocated for 2011 was about \$38,000 for the following activities:

- Travel grants to:
 - International Symposium on Remote Sensing of the Environment (ISRSE) in Sydney, Australia \$2000
 - ISPRS Commission III Symposium, Paris, France \$1,758
 - ISPRS Commission IV Symposium, Orlando, USA \$1,580
 - Joint SSGA/ISPRS/FIG/ICA/Mongolia State University of Agriculture student workshop during the Symposium in Ulaanbaatar, Mongolia \$4000
- Support for Summer School in 2011 in Fayetteville, USA \$5,200
- Workshop Lake Victoria Urbanization Project, Nairobi, Africa \$10,000
- Science Research Initiatives:
 - A Comprehensive, On-line Terrestrial Laser Scanning Bibliography \$4,125
 - ISPRS Blog \$9,385

5. Outlook for Congress Year 2012

The Annual Amount for 2012 is \$US37,900 and ISPRS Council has made the decision for the total funds available after commitments for Awards, will be allocated for travel grants to the ISPRS Congress in Melbourne, Australia.

The Congress is an important event for fund raising. On the occasion of the 2012 Congress in Melbourne Australia, the local organizing committee is planning a fund raising event in Melbourne, with part of the proceeds being passed onto the ISPRS Foundation. As well, there will be an opportunity to make donations to the ISPRS Foundation on the Congress registration form. The Congress will be an important opportunity for the Foundation to raise funds for its future activities. All participants interested in the future of The ISPRS Foundation, which supports individuals from developing countries to improve their knowledge and experience, are urged to support the Foundation activities at the Congress.

New Trustees Appointed in 2011



Dr. Marguerite Madden

Center for Remote Sensing and Mapping Science (CRMS), University of Georgia, USA

Dr. Marguerite Madden is the Director of the Center for Remote Sensing and Mapping Science (CRMS) and Professor in the Department of Geography at the University of Georgia (UGA). She received her B.A. (1979) and M.A. (1984) degrees in Biology from the State University of New York at Plattsburgh and her Ph.D. (1990) in Ecology from The University of Georgia. Her research over the past 27 years at UGA has focused on geographic information science (GIScience) and landscape analysis of vegetation, landscape-level human impacts on natural environments, and more recently, collaborative research in animal behavior, wildlife disease, human geography and environmental design.

Dr. Madden is a Past President and Fellow of the American Society for Photogrammetry and Remote Sensing (ASPRS), Editor of the 2009 ASPRS Manual of GIS and current International Society for Photogrammetry and Remote Sensing (ISPRS) Technical Commission President of Commission IV "Geodatabases and Digital Mapping". She has three grown children and lives in Athens, Georgia with four dogs, three cats and numerous bicycles.



Dr. Mazlan Othman

Deputy Director-General of the United Nations Office at Vienna (UNOV), AUSTRIA

Dr. Mazlan Othman was educated in Malaysia and studied Physics at the University of Otago, New Zealand. On returning to Malaysia in 1981, she pioneered an academic programme on astrophysics at the National University of Malaysia and was appointed Professor of Astrophysics in 1994.

She was seconded to the Prime Minister's Department in 1990 to direct the establishment of the National Planetarium, under the Space Science Studies Division. As its Director-General, she also led the design and manufacture of Malaysia's first remote-sensing satellite, TiungSAT-1, launched in 2000.

In 1999, she was appointed Director of the United Nations Office for Outer Space Affairs (UNOOSA) and, in 2002, returned to Malaysia to set up the National Space Agency. As Director-General, she established the National Space Centre which houses TT&C, AIT, calibration and research facilities; founded the Langkawi National Observatory; and initiated the programme which placed the world's first remote-sensing satellite in the near-Equatorial orbit. That year, she resumed the post of Director of UNOOSA. In 2009, she was appointed Deputy Director-General of the United Nations Office at Vienna (UNOV).



Lewis Graham

President and Chief Technical Officer of GeoCue Corporation, USA

Lewis is the President and Chief Technical Officer of GeoCue Corporation, a company whose focus is geospatial workflow management, particularly for LIDAR data processing. He is also the managing director of QCoherent Software LLC (a GeoCue company), a company that builds LIDAR data processing tools for the ArcGIS environment. Prior to founding GeoCue, Lewis was the founding CEO of Z/I Imaging Corporation, a joint venture company of Carl Zeiss and Intergraph Corporation. Prior to Z/I, Lewis was an Executive Vice President at Intergraph, managing the Mapping and Civil Engineering business units. Prior to Intergraph, Lewis was an officer in the US Navy where he taught physics at Naval Nuclear Power School.

He is an active member of the American Society for Photogrammetry and Remote Sensing (ASPRS) where he currently serves as a director of the board and as the director of the LIDAR Division, the division responsible for airborne and mobile LIDAR. He has chaired the LAS data standard committee since its inception. He is a member of the ASTM E57 data standards committee where his focus is assisting with harmonizing the data standards between E57 and LAS. Lewis is also a member of the Transportation Research Board and currently serves as a panel member of National Cooperative Highway Research Program (NCHRP) 15-44 which is developing standards for mobile LIDAR scanning for transportation.

The ISPRS Science Initiative 1

A comprehensive, on-line terrestrial laser scanning bibliography

By Derek Lichti

Background and purpose

Research activity in terrestrial laser scanning (TLS) has grown considerably since the creation of the first dedicated working group in this area in 2004. Accordingly, there has been a proliferation of TLS literature. Through its various scientific events and the efforts of several working groups, the ISPRS has achieved a leading international position in terms of TLS research activity. The aim of this project was to create a comprehensive, on-line bibliography of TLS publications for free use. It was envisioned as one means by which the Society could not only maintain this position but expand its status.

Project progress and outcomes

The bibliography website (<http://www.tlsdatabase.ucalgary.ca/>) is an exhaustive list of complete reference details for TLS-related papers. The website is hosted at the University of Calgary and has been developed using the available web content management system, Drupal. It has been organised according to subject area, e.g., scanner technology, calibration, registration, 3D modelling, sensor fusion, application area, etc. (Figure 1).

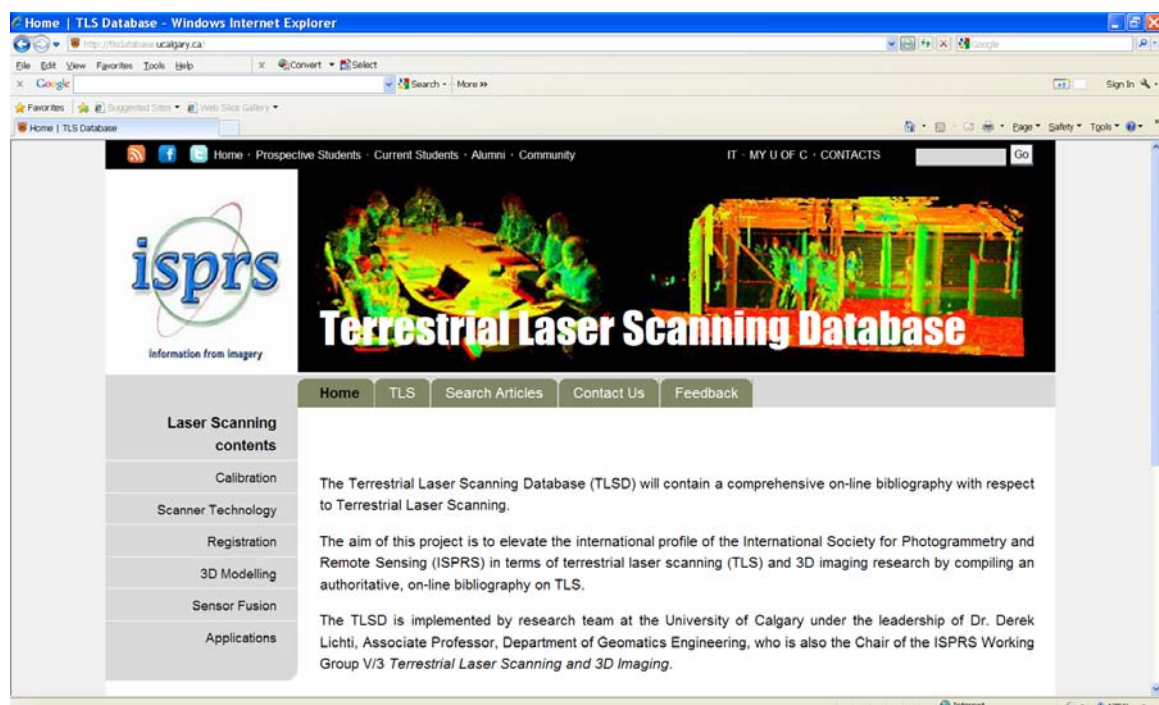


Figure 1. TLS bibliography website showing subject area links on the left.

The database comprises links to journal web pages for journal papers and links to conference or society web pages for proceedings papers. No papers have been posted on the site in order to avoid duplication and to order prevent copyright infringement. Figure 2

shows an example database entry. The bibliographic details for 866 journal and conference articles have been added to the database.



Figure 2. Sample database entry.

The website features a search capability (Figure 3) that allows the user to search the database by author, title or subject. The site also has a contact page for contacting the developers in order to bring errors or new papers to their attention.

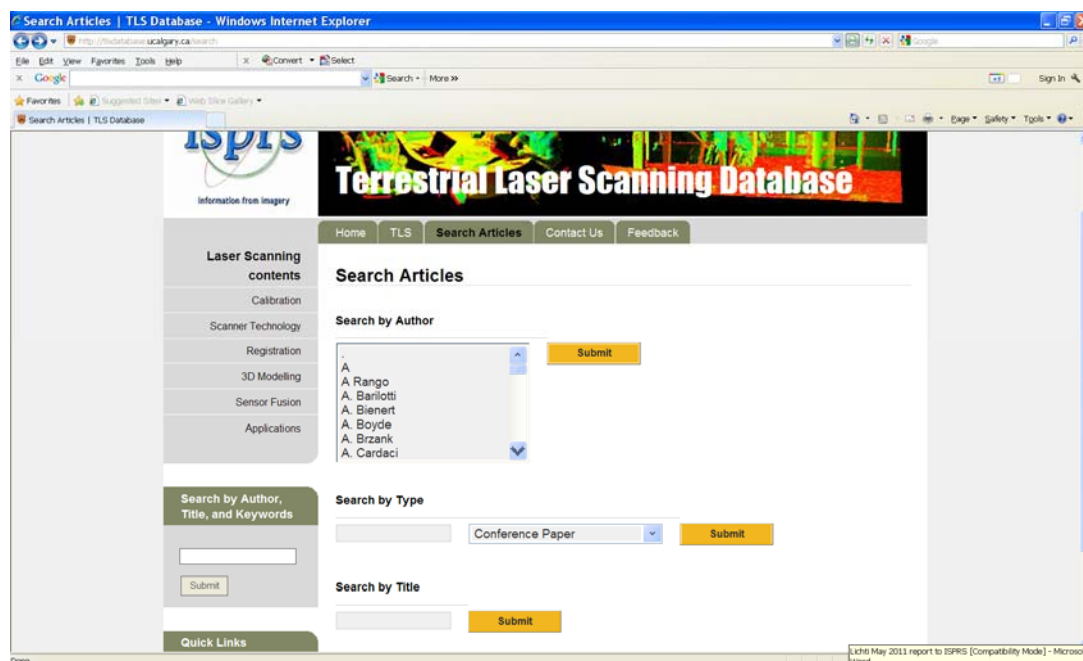


Figure 3. Search page

Dr Derek Lichti, Department of Geomatics Engineering, The University of Calgary
Chair, ISPRS WG V/3 Terrestrial Laser Scanning and 3D Imaging

The ISPRS Science Initiative 2

The ISPRS Blog

By Andy Hudson-Smith and Christopher J. Pettit

The ISPRS Blog was funded out of the ISPRS science initiative in 2009, developed around the WordPress platform the site was set up to augment the current ISPRS web presence. Located at <http://www.casa.ucl.ac.uk/isprs/> selected members have been invited to write for the blog, covering the relevant topics and interests across all commissions and interest groups. The aim was to increase outreach and develop a forum for active discussion of topics. Hosted at the Centre for Advanced Spatial Analysis (CASA), University College London the blog contains links to Flickr Groups, Journals, Publications and integrates a live forum system.

The format and publishing system is based on a variety of other blogs run at CASA. It was viewed that the blog would allow a more dynamic and easy to use system than the current mail list or e-bulletins, in short to provide more of a cutting edge public face for the society. The uptake has been lower than expected, but it is hoped that by opening up the authorship, there will be a larger number of post.

Opening up authorship should increase the amount of posts and allow the organisation to look more dynamic. We would also encourage use of Twitter within the system and indeed by the ISPRS as a whole.



Figure 4. Screenshot of the ISPRS Blog

The Report Section 1

6th ISPRS Student Consortium and WG VI/5 Summer School Advanced LiDAR Data Processing and Applications

By Marguerite Madden

The first International Society for Photogrammetry and Remote Sensing (ISPRS) Student Consortium Summer School in North America was held 30 July to 6 August, 2011 at North Carolina Fayetteville State University (NCFSU), Fayetteville, North Carolina, USA. Organizers of the 2011 Summer School included:

ISPRS Student Consortium Chair and Co-chair, Cemal Özgür Kiviilcim and Krzysztof Stereńczak, respectively;

ISPRS WG VI/5, Promotion of the Profession to Young People, Chair Emmanuel Baltsavias, Institute of Geodesy and Photogrammetry, Swiss Federal Institute of Technology;

North Carolina Fayetteville State University, John Brooks, Dean, University College, Yunkai Chen, Director, International Study Program and Rakesh Malhotra, Department of Government and History at NCFSU; and

ASPRS Student Advisory Council (SAC), Devin Bourland, NCFSU student and ASPRS SAC Council member, and Marguerite Madden, University of Georgia.

Platinum Sponsors of the Summer School were The ISPRS Foundation, Fayetteville State University and the U.S. Geospatial Intelligence Foundation (USGIF), with other sponsors including ESRI and the American Society of Photogrammetry and Remote Sensing (ASPRS) Potomac Region.

The 6th ISPRS Summer School continued the very successful tradition started by the ISPRS Student Consortium in 2005. A total of 55 student participants, 29 male and 26 female, from 20 countries (i.e., Austria, Canada, China, Egypt, Estonia, France, India, Iraq, Italy, Japan, Mexico, Nepal, Poland, Slovenia, South Korea, Spain, Switzerland, Thailand, Turkey, UK and the USA) gathered in Fayetteville during a very warm July/August to attend lectures, perform hands-on laboratory exercises, enjoy social events and experience three excursions. In addition to acquiring knowledge in both formal classroom and informal environments, this was an excellent opportunity for students to meet some of the top lecturers on LiDAR technology theory, data acquisition planning, data processing and applications. It was also a unique opportunity for professors and practitioners to interact with some of the best and the brightest young students from around the world.

A full program was organized for the students with seven lectures and three lab exercises on LiDAR theory from Norbert Pfeifer, Gottfried Mandlbauer and Nicholas Coops. Three lectures were given on applications of LiDAR from Marguerite Madden, Thomas Allen and Valerie Ussyshkin, while airborne fixed wing/helicopter LiDAR data acquisition and terrestrial laser scanning were presented by Bobby Tuck of Tuck Mapping, Ron Roth of Leica Geosystems and James Van Rens of Riegl USA (Figure 5). Although a last minute change in

plans prevented Bobby Tuck from flying one of his helicopters to Fayetteville State University for a live demonstration, he was able to step the students through project design considerations, flight planning and actual data processing from raw data to 3D visualizations. James Van Rens conducted a live data collect of Terrestrial Laser Scanner (TLS) data using a Riegl VZ-400 TLS scanner in the classroom to collect a 3D point cloud and high resolution multispectral imagery of the students. Finally, three student papers were presented during a student session, Christian Carson of ESRI led a professional development discussion and Max Baber of the U.S. Geospatial Intelligence Foundation, gave a presentation at the final dinner banquet. Dr. Baber discussed the need for integrated LiDAR and high resolution image data for disaster preparedness, response and recovery, as well as food security, national security and disease studies.

Equally important as the formal classroom lectures and demonstrations was the opportunity for students to get to know one another and interact one-on-one with the Summer School instructors. Mid-week the participants went on an excursion to Myrtle Beach, South Carolina to enjoy the Atlantic coastal environment. Following the Summer School, a number of students also participated in an excursion to the North Carolina Outer Banks to visit the memorial site of the first flight of the Kitty Hawk by Orville and Wilber Wright (Figure 6).

Student evaluations revealed a short list of improvements for future Summer Schools including:

- Lectures and breaks were a bit long and could be shortened;
- More hands on experience;
- Better and more labs;
- Basic vs. Advanced LiDAR;
- More academic presentations; and
- Improvements in downtown and the weather.

Positive aspects of the Summer School experience also were evident in the student evaluations.

- Fantastic opportunity for networking;
- Wonderful hospitality;
- Great organization;
- No time to get bored;
- Met some of the brightest in the community;
- Terrific summer school;
- Learned a lot; and
- Thumps up!

An important benefit of student participation in international events such as this Summer School is the formation of friendships and connections that have the potential to form career-long connectivity, scientific exchange and cooperative research. Immediately following the Summer School, the students created a Facebook Page and posted photographs, videos and instructional materials. This example of social networking and compilation of personal and academic content is a testament to the value of continued ISPRS

support for student activities. More information on the Summer School, the ISPRS Student Consortium and sponsoring organizations may be found at:

- ISPRS Student Consortium: www.isprs-studentconsortium.org
- ISPRS WG VI/5: www.commission6.isprs.org/wg5/
- Fayetteville State University: www.uncfsu.edu
- ISPRS: www.isprs.org
- ASPRS Student Advisory Council: www.asprs.org/Students/Student-Advisory-Council.html



Figure 5. A program of lectures, laboratory exercises, social events and excursions combined to make the 6th ISPRS Student Consortium Summer School held 30 July – 6 August, 2011 in Fayetteville, NC a great success.



Figure 6. A total of 55 students from 20 countries participated in the ISPRS Summer School.

The Report Section 2

Workshop “Commercial Satellite Imagery Project to support UNEP’s National Environmental Atlases and UN HABITAT’s Lake Victoria Urbanisation Initiative”

By Representatives of RCMRD, Kenya

The ISPRS Foundation has provided financial support for this workshop at the Regional Centre for Mapping for Resource management (RCMRD) in Nairobi from 29th November to 1st December 2011.

The purpose of the workshop was to enable participants to understand the requirements to support development of urban planning maps for the Lake Victoria region and to build capacity amongst local planners so that they are able to use GIS and remote sensing to support their work. More importantly the workshop brought together key international, regional, sub-regional, UN, national, academic and local organizations around a table to develop a strategy on how this group could collectively support the Mapping Africa for Africa (MAfA) initiative.

This workshop and training session were unique in that the urban planners from Kenya, Tanzania and Uganda were provided with high resolution commercial satellite imagery of their local areas and were trained to address real issues in their local work area. Speakers came from RCMRD, EIS-Africa, UN Habitat and UNEP as well as from the United States Department Of State.

This workshop partly funded by The ISPRS Foundation, was essential to understand the real needs of urban planners. Data access alone will not make any difference to these communities. The needs are great but if organisations like EIS-Africa could use its international and continent wide network to leverage broader, financial and technical support there is an opportunity to make a significant positive impact on the cities around Lake Victoria. However any intervention must incorporate engagement with the East African Economic Commission as some of the challenges raised pointed to the lack of policies and legal frameworks at the local level to support integrated urban planning.

Within the financial constraints articulated the gathered group also looked at the use of open source GIS software and participatory/volunteered geographic information systems as options to sustain the process. Customised training to meet the planners’ daily needs must be structured using the expertise of Regional technical centres as well as Universities such as Makerere. Students could assist in producing base-maps and for fieldwork. This would give students practical experience which could be credited to their coursework and also serve to train urban planners.

This meeting was a reality check and an eye opener to many who work at a regional to international level. It was agreed that a long term partnership is needed and that other

partners, like ISPRS, should be brought in to contribute to long lasting and positive change in the region.



Figure 7. Participants in the workshop.



Figure 8. Urban Planners from Kenya, Tanzania and Uganda during GIS training.

The Report Section 3

The ISRSE 34 Symposium

By Elena Lobo

The support from the ISPRS foundation in the form of a travel grant allowed me to attend the ISRSE 34th symposium in Sydney. The ISRSE 34th symposium proved to be an extraordinary event, and it was a privilege and an honor to be given the opportunity to attend and present my research at the event. I was most impressed by the quality of the information presented and by the organization of the event. Most of the topics covered by the oral and poster presentations were of great relevance to my field of interest, which focuses on remote sensing applications for the ecology and conservation of tropical forests.

By attending the event, I was exposed to the most recent scientific and technological advances in remote sensing for the environment. The symposium also proved a great opportunity to meet professionals and scientists that could potentially contribute to the enhancement of my professional career through collaborations and employment opportunities. Finally, as the Central American Regional Coordinator for the ISPRS Student Consortium, the event also presented an excellent opportunity to maintain and strengthen our interactions with regional members and representatives from all over the world.

In conclusion, I believe the ISPRS 34th symposium in Sydney has greatly contributed to my professional development in multiple ways and I cannot stress enough how privileged I feel for being able to attend. I would like to take this opportunity to extend my congratulations to all those who made the event possible.

Financial Overview 2011

By Marguerite Madden

Starting Balance	January 1, 2011		207,526.52
Income			
Investment Earnings			11,190.95
Donations			
	Restricted – Fred Doyle	238.29	
	Unrestricted	5,455.76	
	Research Initiatives	8,825.00	
			14,519.05
Total Income			25,710.00
Expenses			
Administration Expenses			1,131.78
Bonds Loss			3,141.11
Grants			
	Travel Grants		
	Travel Grants ISRSE, Sydney	2,000.00	
	Commission III Symposium	1,758.64	
	Commission IV Symposium	1,580.00	
	Joint SSGA/ISPRS/FIG /ICA/Mongolia State University of Agriculture, Ulaanbaatar, Mongolia	4,000.00	
	Total	9,338.64	
	Science Research Initiatives		
	A Comprehensive, On-line Terrestrial Laser Scanning Bibliography	4,125.00	
	ISPRS Blog	9,385.00	
	Total	13,510.00	
	International Workshops		
	ISPRS SC Summer School, Fayetteville, North Carolina, USA	5,200.00	
	Lake Victoria Urbanization Project, Nairobi, Africa	10,000.00	
	Total	15,200.00	
			38,048.64
Total Expenses			42,321.53
End Balance	December 31, 2011		190,914.99

All units in US Dollar

The Trustees of The ISPRS Foundation



Prof Dr. Dieter Fritsch

(Chair)

Institute for Photogrammetry (ifp)
University of Stuttgart
Germany



Prof Emeritus John C. Trinder

(Operations Officer)

University of New South Wales
Australia



Prof Dr. Marguerite Madden

(Finance Officer)

Center for Remote Sensing and
Mapping Science (CRMS)
University of Georgia, USA



Lawrence W. Fritz

Senior Scientist Emeritus
Lockheed Martin Corp, USA



Prof Dr. Ian Dowman

University College London, UK
1st Vice President ISPRS



Vanessa Lawrence CB

Director General and Chief Executive
Ordnance Survey, UK



Dr. Jürgen Dold

CEO of Leica Geosystems AG,
Heerbrugg
Switzerland



Mike Renslow

President, Renslow Mapping
Services
USA



Akihiro Yamaura

General Manager, Geospatial
Business Unit, Mitsubishi
Corporation
Tokyo, Japan



Lewis Graham

President and Chief Technical Officer
of GeoCue Corporation
USA



Dr. Mazlan Othman

Deputy Director-General of the
United Nations Office at Vienna
(UNOV)
Austria

