

Wavelengths

Columbia River Region

<http://www.asprs.com/ColumbiaRiver>



Volume 2001:4 - December 15, 2001

NOMINATIONS FOR BOARD REQUESTED BY JANUARY 7, 2002

Elections to be held for Region Board of Directors Officer and National Director Positions

NOMINATIONS: Suggestions for nominations are currently being accepted for two positions on the Region Board of Directors which are up for election at the end of this year. Suggestions for nominations for Secretary/Treasurer and National Director will be accepted by the nominations committee through January 7th.

Responsibilities for each position include:

Secretary/Treasurer — Serving as an officer on the regional board of directors requires a four year commitment. Officers serve four one-year terms of office, beginning with the elected position of Secretary/Treasurer and then progressing to serve as Vice President, President and Past President through an automatic annual rotation. The region board typically meets four to five times a year as needed to conduct region business activities. The Secretary/Treasurer is responsible for managing the checkbook and region accounts. The Vice President is responsible for coordinating the technical sessions and educational program. The President is responsible for overall coordination of all business activities, representing the region at the Regional Officers meeting at the annual ASPRS National Conference in the spring and coordinating ASPRS participation in the annual GIS in Action conference which is co-sponsored by the Columbia River Region and the

local chapter of URISA. The Past President is responsible for membership and other support activities.

National Director — The National Director position requires a three year commitment. The National Director sits on the region board of directors and represents the region at the National level. The National Director holds a voting position on the National ASPRS Executive Board and is expected to attend the region board meetings as well as the National Executive Board meetings. The Executive Board typically holds meetings at both the spring and fall national ASPRS conferences. The National Director is elected by the region membership to serve a three-year term of office.

The Region Board has unanimously voted to nominate our current National Director, Tom Pagh, for re-election. Tom has served one three-year term as National Director and has volunteered to commit his time to serving another three-year term. Additional suggestions for nominations for the National Director's position and any suggestions for nominations for the Secretary/Treasurer position should be sent to the nominations committee in care of Secretary/Treasurer Chris Aldridge by close of business January 7th.

ELECTIONS / REQUEST FOR BALLOTS: Elections will be held by electronic ballot in mid-January and the new officers will be installed at the annual business meeting February 1st. Electronic ballots will be sent to all members whose e-mail addresses are current in the region database. Ballots will be sent by mail or fax only if specifically requested. If you prefer to obtain a ballot by mail or fax, contact Region Secretary Chris Aldridge by the close of business January 7th.

QUESTIONS / CONTACT INFORMATION: For additional information on either of these positions, contact any current board member. Contact information for all current board members is included in this newsletter.

CRR ANNUAL MEETING: DINNER AND PRESENTATION

The Annual Dinner is the next regional highlight, scheduled for Friday, February 1. The program includes a presentation by Dr. Daniel Dzurisin of the U.S. Geological Survey, Vancouver, on the recently discovered deformation near Three Sisters Peak in the Cascades. Part of the talk describes the use of Radar Interferometry in monitoring the changing structure. As usual, we have an excellent dinner planned, this year at Willamette Winery, and the installment of next year's board members.

For more information on the Three Sisters study: <http://vulcan.wr.usgs.gov/Volcanoes/Sisters/WestUplift/framework.html>

Students can join ASPRS at the dinner for the sponsored rate of \$10 plus \$10 for the dinner.

PRESIDENT'S LETTER: DOUG SMITH

When I first sat down to summarize the past year, my first thought was that time has really flown by. By the time I finished writing "it is really hard to believe that the year is already over," I started to have second thoughts. Its not that hard to believe after all.

What changed my mind was thinking back on what our organization has accomplished as a group of volunteers who are taking an active role in their profession.

Here are some examples:

* The 2001 GIS in Action conference (which we co-hosted with the local URISA chapter) had one of its most successful years yet. Planning is now underway for the 2002 conference.

* Our scholarship fund is now well established. Thanks primarily to proceeds from the GIS in Action conference, we have now met our initial goal for the amount of capital to invest in the scholarship fund. We have diversified the money into a very conservative interest bear-

ing investment account and we anticipate that over the long term, the scholarship fund will be self-sustaining. While we may continue to invest conference proceeds in this fund, our current status is such that we would also be in a good position to fund other activities.

* We have implemented a program to subsidize membership fees for student chapter members in hopes of increasing student participation in the organization.

* Our September Technical Exchange meeting was very well attended and included some excellent presentations.

* The region web site is up and running.

* The newsletter continues to include very educational and informative content, thanks to the efforts of our editor, remote sensing editor and contributors.

* Some positive steps have been taken towards identifying and resolving licensing issues with regards to photogrammetry, GIS and surveying. This issue came to the forefront last Spring when a House Bill was proposed that included a revised definition of the practice of surveying. The proposed definition could have potentially restricted the activities of many of us in the mapping science profession. Our first step in addressing this issue was to invite representatives from Oregon and Washington professional survey organizations to present their viewpoints on registration and licensing at the 2001 GIS in Action conference. Since that time, a committee has been formed which includes representatives from the key survey, GIS and remote sensing professional organizations in Oregon. This committee is working towards clearly defining and resolving any licensing/registration conflicts between professionals in the mapping sciences. A status report of this committee's activities will be posted on our web site, as discussions progress.

While I can't take credit for these accomplishments, I can take pride in being part of an organization made up of people willing to put in the time and effort to further our profession. The Columbia River Region is privileged to have so many individuals who have taken an active role in our professional organization, both at the local and national levels. I have very much enjoyed the opportunity this past year to work with our region's board of directors and with all of the rest of you who have worked so hard to make this organization a success.

DIRECTOR'S REPORT: TOM PAGH, CP

Even with the strict airport security measures causing, in some instances flight delays, and the latent fears with air travel in general, we had a great turnout at the ASPRS committee and board of directors meeting, held in St. Petersburg, Florida on October 29 and 30.

Our Society is still on a strong financial footing. Due to several large donations to the building fund from corporate members, plus the contributions by individual members, the ASPRS building fund drive has been a great success. Please remember that if you send a contribution to the building to our local Region address, your contribution will be matched my CRR. Once our total contribution is sent in, then National matches that amount. This means that each dollar you contribute becomes a \$4.00 contribution.

One of the hot items up for discussion at the Board of Directors meeting was to decide on how to best protect the tax-exempt status of ASPRS on the national level and of each Region. After several months of research, and input from Region officers, it was decided that each Region would have to incorporate and provide National with quarterly financial reports. If a region fails to supply the necessary reports, then that Region could lose its tax-exempt status and possibly suspended or even dissolved. Staff from National headquarters will be assisting each Region in the incorporation process, plus setting up forms for financial reporting. Accordingly, appropriate changes to our local By-laws will have to be made.

Another change that will be taking place will be the addition of a representative from the Sustaining Membership Council as a voting member of the National Board of Directors.

Please note that a \$10 dues increase, to \$105 per year, will become effective January 1, 2002. The increase is to cover the rising postal rates over the last few years. Our last dues increase was in 1999. However, if you pay your dues prior to midnight on December 31, 2001 you can renew at the current rate and avoid the increase for one year. Check out the ASPRS web site, www.asprs.org, to pay your dues on-line.

Speaking of web sites: Our Region is now "on-line",

thanks to a lot of work by our newsletter Editor, Jackie Olson.

Until next time....Tom

TECHNICAL EXCHANGE: MARGO BLOSSER — VICE PRESIDENT

The 5th annual joint PSR/CRR ASPRS Information Exchange was held this year at the Water Resources education center located in Vancouver, Washington. Attendees of the one-day conference were representative of the geospatial community including professionals from photogrammetry, GIS and remote sensing. The Information Exchange is designed to allow imaging and geospatial professionals to exchange information in a "low-key" format. Individuals were given 10 to 20 minutes to speak about current projects. This year we were fortunate to have three keynote speakers. Al Hanks of Chesapeake Analytics discussed business trends of the satellite industry. Jim Mucenhaupt of Space Imaging discussed the use of non-spectral information for the processing of high-resolution satellite data. Ken Tiffin from the USGS Columbia River Research Lab discussed the application of LIDAR technology and GIS modeling techniques to determine salmon rearing habitat. In addition to the keynote speakers presentations were given by Mike Renslow from Spencer Gross, Sandra Bar from Washington DNR, Ward Carson from University of Washington, Thomas Batt from the Columbia River Research Lab, Patrick Bardel from Portland State University, Duncan Munro from Seattle Public Utilities, Jason Underwood from Titan Systems and John Bright and Karen Kersick from Wa. DNR. Thanks to everyone who presented and attended, we hope to see you next year!

CRR SCHOLARSHIP: NANCY K. TUBBS — SCHOLARSHIP COMMITTEE

Ofer Heyman, a Ph.D. candidate at Oregon State University (OSU), has been awarded the ASPRS Columbia River Region (CRR) Graduate Student Scholarship for 2001. The scholarship award includes a cash award of \$1,000.00, an ASPRS student member renewal for 2002, and a complimentary registration for GIS in Action 2002. A check for \$1,000.00 was presented to Mr. Heyman during an ASPRS CRR OSU Student Chapter meet-

ing on October 25. Tom Pagh, the CRR National Director, made the presentation. Mr. Heyman anticipates completing his doctorate in Geosciences (Physical Geography) in August of 2002. His dissertation research will expand an ARC (NASA's Affiliated Research Center at OSU) project on AFE of aspen stands to a more general rule-based system for automatic extraction of natural features from fine scale remote sensing images. The scholarship will help fund fieldwork for ground truthing, computer maintenance, and travel to professional meetings. Mr. Heyman will write an article for the CRR Newsletter describing his research project.

All of the GIS in Action proceeds will be put into the Scholarship fund. It's almost time to prepare applications for next year's award. There is one award for an undergraduate student, and one for graduate level.

STUDENT MEMBERSHIP

Recruiting new student members: CRR will begin subsidizing membership dues of student members who are affiliated with a student chapter. The regular dues of \$40 will be reduced to \$10. That's an amazing savings. Renewal applications and dues will be forwarded from the chapter advisor to the Regional Treasurer.

The CRR currently sponsors two student chapters: at Oregon State University and Central Oregon Community College. The goal of the region is to start chapters in colleges where mapping sciences are represented. The requirements are few: an advisor who is a current member, and students who have an interest in the fields of remote sensing, photogrammetry and/or GIS and are or will apply to be members. Contact any board officer (listed on page 5) to request further information.

GUEST WRITERS WANTED

This is an opportunity for open involvement of members with the newsletter. We're looking for people who want to contribute articles on some aspect of the profession: technical, educational, project-oriented, or coverage of a professional event. The format is 500 words or less, and should include a short introduction to you, the writer. Graphics can be included, keeping in mind the limitations of a single page. If you are interested, contact the editors and we'll get the ideas rolling.

BUILDING FUND DONATIONS

Columbia River Region continues with our dollar-matching contribution to building fund donations. Donations to the fund through the rest of this year are matched 1:1, and then forwarded to the national level, where they're doubled again. That's 4:1, about the best investment you can get. The regional matching cap is set at \$1000, there have been some donations, but we're not there yet. The support of members has enabled the mortgage on the building to be decreased substantially. If you can contribute, send your check, payable to the Columbia River Region, ASPRS, to Chris Aldridge, c/o Spencer B. Gross, Inc., 13545 NW Science Park Drive, Portland, OR 97229-5457.

SPONSORS HAVE A NEW VENUE

Sponsors to the newsletter have a new benefit with the addition of the Region's webpages. Where the newsletters will still publish the business card of the sponsor, they will also be added to a separate page on the website. The card will now also serve as a link to the sponsor's webpage. The cost is \$125 per year, for four newsletter issues and the website listing. Contact Chris Aldridge at chris@sbgmaps.com or c/o Spencer B. Gross, Inc., 13545 NW Science Park Dr., Portland, OR 97229, to update your sponsorship or start a new one.

GIS IN ACTION 2002

The Columbia River Region ASPRS and the Oregon/Southwest Chapter of URISA will again join forces to host the annual GIS in Action conference. GIS in Action 2002 will be held April 1,2 and 3 at the Lloyd Center Double Tree Inn in Portland. The conference web site can be accessed through links at our region web page (www.asprs.org/columbiariver) or through the local URISA web site (www.orurisa.org). The conference program is currently in the planning stages. If you have any suggestions or want to contribute to the program, please contact Region President Doug Smith.

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CALENDAR 2002

SCHEDULED EVENTS - Selected events - The CRR calendar web page holds links to these and other organizations and their meeting schedules. If you know of any we've missed, send a note to the editor. <http://www.asprs.org/ColumbiaRiver/calendar.html>

JANUARY

19-23: MAPPS Winter Meeting, Cabo San Lucas, Mexico:

20th anniversary of MAPPS - a panel on the future of geospatial community and its market, MAPPS Federal Agency Liaison Committees, ISO 9000 and more. Keynote speaker is Hector Lamas, coordinator for the Instituto Nacional de Estadística Geografía e Informática for the Mexican State of Baja California, who will discuss the mapping and GIS community in Mexico.
<http://www.mapps.org/wintmeet02.htm>

20, Kool Apps Portland Area GIS User Group of URISA:
Presentations "of the kooooolest GIS applications around."

3-5 pm; OGISA Annual Meeting and other events, 5-9 pm
Portland State University, Portland OR - If you have an application to demonstrate, contact Bob Haas at (541) 330-4605.
<http://storefront.metro-region.org/drc/koolapps/index.cfm?LoadPage=program>

24: NE Oregon GIS User's Group Meeting, Agenda to be arranged; ODOT Compound Building in La Grande, 2-4pm.
<http://www.oregontrail.net/~akramer/neorgisug.htm#events>

FEBRUARY

1: Columbia River Region-ASPRS Annual Dinner

7-8: Washington State Chapter of URISA, WAURISA Annual Conference: Bellevue, Washington; Oregon & SW Washington URISA - Contact: Kimberly S Dietz, 425/556-2415, Fax: 425/556-4242; kdietz@ci.redmond.wa.us, <http://www.waurisa.org>

Date not set: LSAW Conference -SPS Skamania Lodge
<http://www.lisaw.org/lisaw2002.htm>

MARCH

17- 20: 2002 GITA Annual Conference, Tampa Convention Center, Tampa, Florida USA
GITA's Annual Conference and Exhibition
http://www.gita.org/events/conferences/gita_annual/02_25/02_25_open.html

March 19-23: Association of American Geographers, 2002 Annual Meeting, Los Angeles, California, <http://www.aag.org/>

APRIL

April 20-25: ASPRS Annual Conference; co-hosts: American Congress on Surveying and Mapping (ACSM) and International Federation of Surveyors (FIG); Washington, DC. <http://www.fig2002.com>

*REMOTE SENSING UPDATE:
RALPH W. KIEFER, ASPRS FELLOW*

High Resolution Satellites

Part 1 of 2

This article is concerned with “high resolution” satellites. Satellites such as Landsat-5, with its 30 m multispectral mode and 15 m panchromatic mode resolution, and SPOT-4 with its 20 m multispectral mode and 10 m panchromatic mode resolution are considered “moderate resolution” satellites. Here, we consider “high resolution” satellites to have a spatial resolution of about 2-4 m in a multispectral mode and 1/2-1 m in a panchromatic mode.

Figure 1 shows a comparison of images with 30 m, 5 m, and 1 m resolution cell sizes. (Although the 1 m resolution example in *Figure 1* is shown in a multispectral mode, such resolution is available today only in panchromatic mode images.)

Film-based high resolution satellite systems will be described in this issue; multispectral scanner systems will be described in Part 2 (next issue).

Film-Based Systems

The Russian company SOVINFORMSPUTNIK, founded in 1991, has an exclusive right to use data of earth surface space survey missions made by Russian military satellites, to distribute these data on a commercial basis, and to sell the products and services produced therefrom. These data all result from scanning film images from space.

Spin-2

SPIN-2 (Space Information-2 Meter) imagery results from the commercial marketing of image data collected by formerly-classified Russian military satellite systems. The SPIN-2 marketing effort is the result of a partnership between Aerial Images, Inc. (www.aerial-images.com) and the Russian Space Agency, SOVINFORMSPUTNIK (www.sovinformsputnik.com).

SPIN-2 data are produced by digitizing panchromatic (0.51 to 0.76 micrometer) photographs taken by the KUR-1000 film camera from a flying height of 220 km.

Figure 1 (right) Examples of resolution cell sizes (University of Wisconsin-Madison football stadium): top image has a 30 m resolution cell size, middle image 5 m, bottom image 1 m. From: Lillesand and Kiefer, *Remote Sensing and Image Interpretation*, 4th edition, Wiley, 2000.

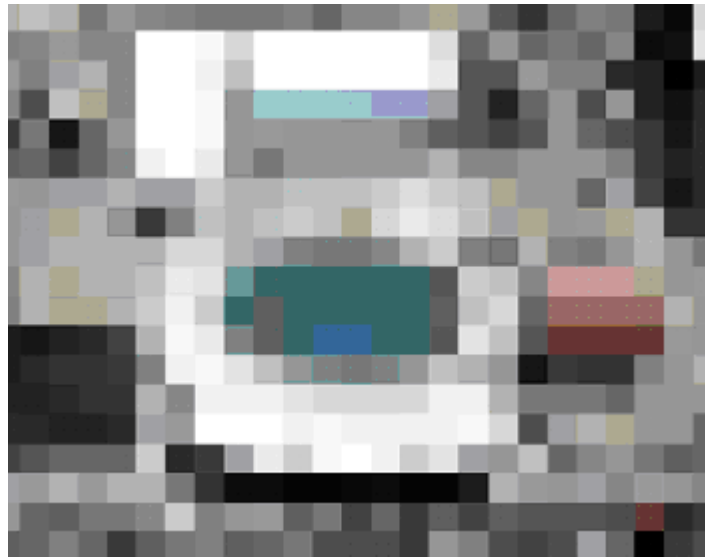


Figure 2 is an example of SPIN-2 imagery that illustrates the level of detail that can be seen with such data (in the original image, individual cars can be seen on the major streets).



Figure 2 SPIN-2 image, Place de la Nation, Paris. North is to the right. (2-meter spatial resolution)

TerraServer

TerraServer provides high-resolution imagery from a variety of sources, including Orbimage (described in the forthcoming Part 2 of this article) and SPIN-2. Data can be viewed without charge on the TerraServer web site (www.terraserver.com) at a resolution of 8 m. Viewing at 4, 2, and 1 meter resolution is available for a fee. *Figure 3* shows a sample TerraServer web page.



Figure 3 Sample TerraServer web page, Washington, DC.

SOVINFORMSPUTNIK 1 Meter Data

Beginning in 1992, Russia has acquired a large archive of space photographs with a spatial resolution of 1 m. The archives contain data of substantial areas of the US, Europe, and Asia, as well as selected areas in South America and the Far East.

The main instrument for data acquisition is the Space Mapping System “Kometa,” a satellite system specially designed to produce stereographic panchromatic photographs for production of 1:50,000 scale topographic maps. The satellites are unmanned and return film to earth via parachute in specially-designed modules.

Figure 4 is an example SOVIETINFORMSPUTNIK 1-meter resolution data. Note the improvement in spatial detail as compared with the 2-meter-resolution SPIN-2 image.



Figure 4 SOVINFORMSPUTNIK 1-meter spatial resolution satellite image, Los Angeles.

Part 2 of this article (to be published in the next newsletter) will describe high resolution satellite multispectral scanner data.

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