

## Annual Report Region Presidents and Officers Meeting

Present were:

NAME	REGION	CAPACITY
Paul Hopkins	Central N.Y.	Director
Len LaFeir	Central N.Y.	President
Roy Teal	Mid South	Director
Bill Ripple	Columbia River	Vice President
Thomas J. Lauterborn	Potomac	Director
Donald A. Smith	North Atlantic	President
Nancy Tubbs	Rocky Mountain	President
Peter Boniface	Rocky Mountain	Vice President
William Corey	Rolla	President
Phil Kelley	St. Louis	Director
William G. Hemple	St. Louis	President
Robert J. Lung	Southwest U.S.	Vice President
Barry Napier	N. California	Director
Michael Renslow	N. California	Past Director
Russell G. Congalton	N. California	Vice President
Donald Karns	Puget Sound	Director
Chris Emmott	Puget Sound	President
Janet Degner	Florida	Director
Charles Andregg	Florida	Past Director
Ed Comer	Florida	President
Paul Brooks	Alaska	Director
Kent Swanjord	Alaska	President
Bob Thompson	Texas-Louisiana	Director
LeLand D. Whitmill	Intermountain	Director
James E. Duncan	Intermountain	President
John L. Taylor	Intermountain	Vice President
Vincent V. Salomonson	ASPRS	Vice President-Elect
Florence Stevenson	ASPRS	Assis. Executive Dir.
Camille Millburn	ASPRS	Staff
Stewart McDonald		Building Fund Consultant

### Introduction and Remarks

Vice President-Elect Salomonson called the meeting to order at 10:03 am, introduced himself, and welcomed everyone in attendance. He further mentioned that he is anxious to work with the Regions and promote the education of people in the profession at both the college and high school levels. In addition, he stated that ASPRS has a great opportunity to strengthen and promote its membership. A sign-up sheet was circulated.

### Recent and Future Region Activities

Each Region represented at the meeting reviewed past and future activities of that Region. A variety of activities were discussed, including: scholarships, technical sessions, tours, social events, newsletters, and membership programs.

Some specific information covered included the following:

The **Rocky Mountain Region** had a busy year in 1988. They began with a 4-day ASPRS-ACSM Symposium in Denver which included several GIS workshops and technical sessions. They also sponsored an ASPRS booth at a GIS Symposium held in Denver. Throughout the year, they held several tours to places such as the Colorado School of Mines Experimental Mine, Denver Museum of Natural History, and the Remote Sensing Lab at the University of Colorado. In addition, two successful social events were held, a barbeque in June, and a Christmas dinner in December. Two scholarships of \$250.00 each were also awarded in 1988. Plans for the coming year include: holding several 1-day

conferences at different universities in the Region, increasing student awareness and membership in the Region, increasing the number of technical articles in the joint ASPRS-ACSM newsletter, presenting technical sessions for all members in the Rocky Mountain Region, and promoting the 1990 Annual Convention in Denver, Colorado.

**Intermountain Region** held nine dinner meetings during the year. In addition, they had a Fall workshop on Air Navigation. Objectives for the coming year include increasing their membership by actively recruiting more members, and continuing their scholarship program.

**Rolla** held eight technical meetings in 1988 which covered topics such as "Applications in Database Development," "Projections and Coordinate Systems," and "Developments in Satellite Imagery." An annual dinner meeting and awards presentation took place in January with over 100 ASPRS members attending. The Region surpassed their 1988 membership goal, and participated in the Region Membership Drive sponsored by ASPRS Headquarters. The first annual picnic was held with over 200 members and prospective members in attendance. Other activities included: cataloging the ASPRS Library, approval of a student chapter at the University of Oklahoma, approval of the rolla Region bylaws by the membership, and mailing the first "News Bulletin" to members. Plans for the coming year include: another annual picnic, meetings at the University of Kansas, USGS, and the US Forest Service, and development of a Gene Lortz Memorial Scholarship.

**Northern California** held several successful technical meetings in 1988 including one at the Federal Aviation Administration Air Traffic Control Center which attracted 39 attendees. ASPRS President Alden Colvocoresses was the keynote speaker for a technical meeting held at the USGS in Menlo Park. The Region put together a California Mapping Conference in October which included 60 speakers, 46 exhibitors, and 512 attendees. Plans for future activities include developing a more sophisticated newsletter to be published quarterly, awarding one (or two) \$500.00 Outstanding Student Award(s), and providing support for investigations related to licensure of Photogrammetric Engineers in California through the State Board of Registration for Professional Engineers and Land Surveyors. Other activities planned include cosponsorship of technical meetings with BAAMA (Bay Area Automated Mapping Association), and the development of chapters in areas where there are clusters of members, i.e. Hawaii. Seven technical meetings are also being planned for the coming months.

**Puget Sound** exceeded both the Active Member and Student Member goals set by National in 1988, and they hope to continue this trend in 1989 by recruiting people involved with GIS functions. The Region has two scholarships available, one at the University of Washington, Seattle and one at the University of British Columbia. The awards are \$1,100.00 and \$150.00 respectively. \$500.00 will be added to the award at the University of BC this year. The Region newsletter will be under the guidance of a new editor, Chris Greer. This year, Puget Sound is continuing with the program of contacting schools (high school and college level) to provide increased awareness of our industry. Other activities include, a one-day workshop meeting with a combination of technical sessions and visits to area companies, a Fall meeting, and an annual golf tournament.

**Mid South** held its annual Spring meeting this year in April. Every year, a student paper competition is held at this meeting; however this year they tried something new and awarded cash prizes for the best papers (\$150 1st, \$100 2nd, \$50 3rd). This resulted in a very big turnout, the same event is being planned for next year. Mid South also formed a sixth chapter — the Mississippi Chapter. Other activities in 1988 included a Fall meeting in Lexington, Kentucky, and an award winning quarterly newsletter. The Region is getting involved with local URISA Chapters that are growing in the Mid South area and is making plans to bring in members through relations with these Chapters.

**St. Louis** explained that they have a problem in the Region because their Region is so spread out. However, they do have a Minnesota Chapter with a membership of 30-40 people. The Region is trying to increase its membership and has appointed a membership chairman to do so. St. Louis holds four evening technical meetings each year, and an annual meeting. President Hoffer attended the annual meeting last August. The Region participated in community activities by judging a science fair, and serving as a judging panel for student scholarships. The Region has budgeted to publish a newsletter called the Photogram, and has developed a database of the membership to check the membership information coming from Headquarters. The Region has also supported the Building Fund Drive with a generous contribution.

GIS/LIS '88 dominated the **Texas-Louisiana** Region activities throughout the year. The Region held a joint meeting with the Texas Society of Professional Surveyors and took part in their annual workshop. An annual meeting was held in 1988, and Roger Hoffer attended. Marilyn O'Cuillinn attended the 1989 annual meeting and installed the new Region officers. Objectives for 1989 include, joint meetings of local interest with other allied societies, establishing at least one student chapter, and putting on a one-day seminar on GIS for local officials. The Region is trying to get a scholarship program underway, \$5,000 is in the scholarship fund.

**Alaska** held their primary event, the Annual Alaska Surveying and Mapping Conference, jointly with ACSM in February. Four short courses, technical sessions, and social events were held. Goals for 1989 include: a membership drive, two issues of a Region newsletter, a student chapter at the University of Alaska at Fairbanks, and the revision of the Region bylaws. A scholarship of \$1,500 will also be offered again.

**Potomac Region** held a large technical meeting at the University of Maryland which included a series of GIS/LIS sessions. The Region is large, so they were trying to move the meetings around the area, the chapters within the Region have helped with this problem. Each of the chapters has total control over the scholarships they offer, and the chapters also hold their own meetings. Plans for 1989 include the annual dinner dance in June, and a fund raising campaign to raise money for the new ASPRS building.

**Central New York** successfully met the 1988 goal of a 6% membership increase; they ended the year with 161 Active Members, and 47 Student Members. The Region also held a joint meeting with the Society of American Foresters and Roger Hoffer attended. Other activities included a tour of the Kodak facilities, and a meeting in Syracuse. The Region is giving their newsletter an overhaul, a contest was held to find a title for the newsletter and the winner was the "Central Prospective." A second competition is being held for a newsletter logo design. Goals for 1989 include a building fund drive to raise money for Headquarters, a minisymposium to be held in May, and a membership drive. The Region will also continue to offer the two undergraduate and two graduate student scholarships.

**Columbia River** recently cosponsored Geoprocessing and Surveying Conference in Boise, Idaho. President Hoffer spoke at the conference. Other events included an evening at the Portland State University Digital Cartography Lab, and a one-day conference on Remote Sensing/GIS for Resource Management. An annual dinner will be held in May 1989, a yacht has been chartered. The Region has donated \$1,000 to the ASPRS building fund. The Region will be awarding two \$250.00 scholarships at their annual technical meeting, and would like to hear from other Regions about what criteria they use for giving student awards.

**Florida** holds four meetings each year. These include two Directors meetings, one joint meeting, and one ASPRS meeting. URISA has formed a Florida Chapter, which will be involved in joint meetings in the Region. Vendors are invited to set up displays at the meetings, and papers are also given. County and government workers were invited recently, and this was very successful. The Region is heavily involved with the University of Florida Surveying and Mapping program. The Region gives \$2,000 to the University to defray the out of state resident costs for those interested in attending the University. Also, the money helps to decrease the costs for students at the University to attend ASPRS Region and National meetings. Objectives for 1989 include working towards registration of Photogrammetrists, and a fund raising drive to raise money for the new Headquarters building.

**North Atlantic** Region recently reelected the Region officers for a second term of office in order for them to complete the Region goals they set. Goals which the Region already accomplished include, the revision of the bylaws, a successful membership drive, and two successful meetings in the New England Chapter. Objectives for this year include, forming a student chapter at the University of Massachusetts, looking for a Region newsletter editor, and investigating the licensure of photogrammetric engineers in the North East.

Vice President-Elect Salomonson thanked the Regions for their reports, and stated that he was pleased with the Regional activities.

## Report on the Building Search

Stewart McDonald, the Fund Raising consultant, explained that the search for the new ASPRS Headquarters building has been narrowed down to two buildings. One is located in Bethesda, Maryland, and the other in Falls Church, Virginia. Stewart reported that ASPRS has received a large contribution from Kodak, and several Regions, but that we still have a long way to go. He suggested that all Regions take part in this campaign and asked that the Regions call Headquarters if they need help in developing a Region program to raise money. All Region contributors will be recognized once the building is occupied. Stewart further stressed that there is an urgency to this effort because ASPRS must be out of their current office soon. The Regions will be asked to come up with the names of companies in their Region that are not Sustaining Members so that these companies can be contacted to ask for corporate donations to the building fund.

## Old Business

**Region Bylaws:** Charles Andregg, Bylaw Committee Chairman, reminded all Regions that they must send a copy of their revised bylaws to Headquarters as soon as possible. The Bylaws Committee will be reviewing all Region bylaws to be sure they do not conflict with the National bylaws. Regions do not need to wait for approval of the Bylaw Committee before putting their bylaws into effect. The revised Region bylaws do not need to have a Constitution.

**Election of Region Membership Chairpeople:** Camille Millburn reminded the Regions that they must elect a Region Membership Chairperson. This person will act as the liaison between Headquarters and the Regions on membership promotions, and will exchange ideas on membership programs and retention with other Region Membership Chairpeople. There are still nine Regions that need to elect a membership Chairperson.

**Region Scholarships:** Camille Millburn reminded the Regions to send in all information concerning the scholarships available in their Region. This information should include a description of each scholarship offered, a copy of the scholarship application form, and the name and address of the Region Officer to contact

for more information. The scholarship information is needed for the "Student News" that will be put in *PE&RS* every other month beginning in June/July. This information is needed before 1 May 1989.

**Region Financial Reports:** Flo Stevenson explained to the Regions that she had received the 1989 Financial Report forms from all of the Regions, but she would be sending an additional form for all of the Regions to fill out shortly. The additional form is a resolution for each Region under the name of ASPRS.

## New Business

**Region Description:** Camille Millburn urged all Regions to work on a 200-300 word description about their Region. This description should be mailed to Headquarters as soon as possible, no later than 1 July. The description of the Region will be placed in the "new" Member packets for each new member that joins ASPRS. The description will familiarize the new member with the officers, and activities within the Region. This would also be a great way for the Regions to obtain volunteers. Samples of other Region descriptions can be obtained from Headquarters.

**Region Newsletter Suggestions:** Camille Millburn passed out a handout for "Hints on Newsletter Publishing," to help Region newsletter editors produce award-winning newsletters. The content is the most important part of any newsletter!

**Correspondence with Headquarters:** Camille Millburn stressed that all Regions must send copies of all mailings to Headquarters. This includes notices of technical meetings, social events, membership drive letters and at least 50 copies of each newsletter. This correspondence with Headquarters is the only way the ASPRS staff can keep up with the activities that are going on in the different Regions. In addition, copies of the minutes of all Region Board meetings should be sent to Headquarters. This correspondence is a large factor in determining the Region of the Year!

The Region Presidents and Officers meeting was adjourned at 12:34.

Respectfully submitted,

— Camille Millburn  
Membership Services Manager



*Above, the Region Presidents and Officers meeting.*



*Division Directors meeting.*

## Annual Report Primary Data Acquisition Division

The activities of the Primary Data Acquisition Division (PDAD) have occurred mainly in two areas during the reporting period. These two areas are: (1) preparation and submittal of material for a PDAD brochure; (2) formation of sessions for the Spring 1989 Annual ASPRS meeting in Baltimore.

The material for a PDAD brochure was prepared and reviewed by each of the Committee Chairpersons of PDAD Committees. The prepared material was submitted to ASPRS before the end of 1988 and we are awaiting action by ASPRS Headquarters.

Several sessions covering most of the main activity areas of the PDAD will exist during the ASPRS Annual Convention in Baltimore. Dr. Bill Clark represented PDAD in working with this Spring Convention Program Committee (M. Brumm) in review-

ing contributed and invited papers and the formation of sessions. The Chairpersons of the PDAD Committees were placed as session leaders insofar as circumstances permitted. Additionally, a special session on the Earth Observing System (Eos) of NASA and Civilian Satellite Remote Sensing issues was suggested, accepted, and organized.

Future actions are planned on ASPRS publications related to PDAD objectives. A review will be made of statewide initiatives on the use of remote sensing for evaluating environmental concerns. The review will be done from the perspective of what primary data information should be available before such state government initiatives are undertaken.

— Vincent V. Salomonson, Director, PDAD

## Annual Report Remote Sensing Applications Division

The individuals involved with RSAD have been very active during the last year in: developing technical sessions, presenting papers and/or moderating technical sessions for the spring and fall conventions and associated meetings/workshops; organizing, writing, or in other ways contributing to the development of the new "Science and Engineering Series" and other publications; chairing and serving on the selection committees for the "Alan Gordon Memorial Award" and the "Autometric Award"; serving as associate/assistant and associate editors and technical reviewers for *PE&RS*; and working on joint ASPRS/ACSM Committees (e.g. GIMS, Satellite Mapping and Remote Sensing, etc.).

We have made progress with our new Functional/Topical matrix-type divisional organization. Although we have received little feedback from division members on whether or not they prefer this new organizational structure, an open letter to the membership about the current divisional status, which was published in the February 1989 issue of *PE&RS*, may provide the stimulus for members to respond. Nevertheless, the new divisional structure has attracted a few new and very active participants, who have gotten meetings organized, established working subcommittees, and performed other activities.

Presently, we have the following committees and respective chairs, who represent a good mix of the government, private, and university sectors: (Functional)...GIS - Scott Madry, ITD/SRSC; Digital Image Processing - Bruce Quirk, USGS/EDC; Visual Image Interpretation - Bob Ryerson, CCRS; Education Research and Innovation - Demetre Argialas, LSU; Standards, Specifications and Quality Assurance - Margaret G. Mayers, SPOT; (Topical)... Engineering, Atmospheric and Hydrospheric Sciences - John Lyon, OSU; Plant Sciences - Russ Congalton, UC-Berkeley; Earth Sciences - Vacant; Archeology, Anthropology and Landuse - Jim Valiga, Autometric, Inc. Most of these committees are on track and running smoothly with the notable exception of Earth Sciences, which is moving along at "plate-speed." However, we will "leave no stone unturned" in our efforts to get this committee actively functioning again.

Other activities of general interest are: development of a new division brochure, which should be printed in time for the spring '89 convention; assistance with the development of guidelines for the practice of remote sensing, which is being sponsored by The American Society for Testing and Materials, Remote Sensing Committee, D18.01.03; review and assistance in editing the new GIS video, which is being produced by the ASPRS Communications staff; and development of a compendium of articles ("Engineering Applications of Geographical Information Systems and Remote Sensor Data") by RSAD's Engineering, Atmospheric and

Hydrospheric Sciences Committee for ASPRS's use in one of its new publication series.

In summary, the functions of RSAD are still being responsibly carried out (albeit by the same few dedicated individuals) and the transition phase to the new organizational structure seems to be successfully winding down. I will be issuing a call for new RSAD volunteers via a mailing to RSAD members, if the announcement in *PE&RS* and the new divisional brochure are only marginally successful in stimulating more active participation by members. The formation of the new GIS Division is expected to have some impact on RSAD membership and member activities. The impact could be negative by pulling some members away from RSAD, because most RSAD members are also actively involved in GIS activities. However, the impact could be positive by attracting many new members to ASPRS, who may have mutual interests in RSAD as well as GISD. I am confident that we can achieve a synergistic relationship between RSAD and GISD members just as the two disciplines tend to be synergistic in nature.

— Maurice O. Nyquist, Director RSAD

## Annual Report Engineering, Meteorology, and Hydrology Committee Remote Sensing Applications Division

The Committee met in Virginia Beach, VA on 14 September 1988. Chairman John Lyon and Committee members discussed a variety of issues and formulated activities. An important consideration was planning and executing Publications for our constituency. William Johnson of SUNY-Syracuse indicated that two projects were identified to be of interest to readers, as judged from his study. These included: a) a Compendium on GIS and Remote Sensor Data for Engineering Applications, and b) development of an edition of the ASPRS Science and Engineering Manual Series.

Both efforts will require work and the initial Committee charge is to formulate proposals and present them to the ASPRS Publications Committee. These efforts will provide opportunities for a number of members to contribute to the Committee.

Activity a) above has been addressed by John Lyon and Jack McCarthy. They have produced a manuscript for the GIS Compendium, and submitted it along with a publication proposal to the Publications Committee. To date the manuscript has been ac-

cepted for publication pending review. Reviews will be received soon, and the products will be ready for publication.

It remains to address the staffing for activity b), our contribution to the Manual Series. We should evaluate Chapter titles, contributors, and a schedule for the draft proposal.

The Committee has also devoted considerable efforts to developing good inter-Society liaison. Member Dr. Charles K. Paul of USAID and the ASPRS Liaison Committee have developed a cooperative agreement with the American Society of Civil Engineers. This will lead to the cosponsorship of a Technical Session at the Fall Meeting in Cleveland, 1989. "Water Resource Engineering Applications of Remote Sensing" will be cospon-

sored by ASCE Aerospace Division Remote Sensing (EARS). ASPRS will no doubt also cooperate in the production of the EARS Specialty Conference on remote sensing and GIS in May, 1990, Washington, DC.

These efforts are described in the "Engineering Activities" section of the newsletter North Coast News.

The Committee is actively seeking members, and many have been nominated. In particular, we seek members in subject areas that enjoy new attention with the change in Committee charge and name.

— John G. Lyon, Chairman, Engineering, Meteorology, and Hydrology Committees RSAD

## Annual Report Professional Practice Division

The Division Officers for 1988 were as follows:

Division Director, R.R. "Sky" Chamard  
Assistant Division Director, Roger E. Crystal  
Chair, Publications Committee, John G. Lyons  
Chair, Private Practice Committee, George F. Walker  
Chair, Government Practice Committee, Wayne H. Valentine  
Chair, Standards & Specifications Committee, Dean C. Merchant  
Chair, Program Planning Committee, Harry A. Stiller  
Program Coordination 89 Spring Convention, Terry Gossard

The four major goals of the Division were restructured and made available to members:

1. Serve as an outlet for concerns for all professional photogrammetrists in all practicing areas of the Society.
2. Provide a point of reference for recognition of photogrammetry as a practicing science that needs to be recognized by Federal, state and local agencies as a professional service.
3. Provide liaison with all other Divisions to assure that Managers have a forum for representation in the professional practices.
4. Continue the development of guidelines and specifications for photogrammetric digital and conventional mapping and for GIS accuracy requirements.

A "STRAW MAN" draft paper is out to members of the Division and others for their review and comments concerning the taxing problem of getting better recognition of the Photogrammetrist by Federal agencies and state governments. The final of this paper and recommended actions by the Board should be ready for the Spring 1990 Meeting.

There has been interest by the Industrial Measurements Group on developing standards for some of their measurement technology. This will be of interest at the Baltimore 1989 meeting. I expect a group will be organized to pursue further the requirements and possible legal concerns.

— R.R. "Sky" Chamard, Director, PPD



Professional Practice Division meeting.

## Annual Report Standards and Specifications Committee (SSC) Professional Practice Division

A significant event in the activities of the SSC occurred during this year. The draft standard for large-scale map accuracy was adopted by the ASPRS Board of Directors during its March 1988 meeting in St. Louis. The vote was unanimous with one abstention. It is a point of pride and satisfaction for those members of the SSC and officers of the PPD who contributed to the stand-

ard's formulation over the last seven years and to its acceptance as an ASPRS standard.

The SSC met in St. Louis to discuss the question of distributing and maintaining the new map accuracy standard. Tentative recommendations included publishing the standard in the *PE&RS*, integrating the document into ASPRS' publication series, and announcing the standard to all state agencies of transportation and of natural resources. It was thought essential that the appropriate Federal agencies be made aware of the standard and apprised of its potential as a point of beginning for revision of the National Map Accuracy Standard.

The SSC met at the semi-annual ASPRS conference at Virginia Beach in September 1988. At that time it reviewed progress on its strategy for distributing the map accuracy standard and found it to be on track. The initiation of further standard setting activities will await evidence of need as it may be expressed by the ASPRS.

The SSC intends to meet at the annual ASPRS conference in Baltimore in April 1989.

— Dean C. Merchant, P.E., L.S., Chairman, SSC/PPD



Standards and Specifications Committee meeting.

# ASPRS INTERIM ACCURACY STANDARDS FOR LARGE-SCALE MAPS

The American Society for Photogrammetry  
and Remote Sensing - 1988

These standards have been developed by the Specifications and Standards Committee of the American Society for Photogrammetry and Remote Sensing (ASPRS). It is anticipated that these ASPRS standards may form the basis for revision of the U.S. National Map Accuracy Standards for both small-scale and large-scale maps. A major feature of these ASPRS standards is that they indicate accuracy at ground scale. Thus, digital spatial data of known ground-scale accuracy can be related to the appropriate map scale for graphic presentation at a recognized standard.

These standards concern the definitions of spatial accuracy as they pertain to large-scale topographic maps prepared for special purposes or engineering applications. Emphasis is on the final spatial accuracies that can be derived from the map in terms most generally understood by the users.

## 1. Horizontal Accuracy:

Horizontal map accuracy is defined as the rms error<sup>1</sup> in terms of the project's planimetric survey coordinates (X, Y) for checked points as determined at full (ground) scale of the map. The rms error is the cumulative result of all errors including those introduced by the processes of ground control surveys, map compilation and final extraction of ground dimensions from the map. The limiting rms errors are the maximum permissible rms errors established by this standard. These limiting rms errors for Class 1. maps are tabulated in Table 1E (feet) and Table 1M (meters) along with typical map scales associated with the limiting errors. These limits of accuracy apply to tests made on well-defined points only<sup>2</sup>.

TABLE 1E. — PLANIMETRIC COORDINATE ACCURACY REQUIREMENT (GROUND X OR Y IN FEET) FOR WELL-DEFINED POINTS - CLASS 1. MAPS

PLANIMETRIC (X or Y) ACCURACY <sup>3</sup> (limiting rms error, feet)	TYPICAL MAP SCALE
0.05	1:60
0.1	1:120
0.2	1:240
-----	
0.3	1:360
0.4	1:480
0.5	1:600
1.0	1:1,200
2.0	1:2,400
4.0	1:4,800
5.0	1:6,000
8.0	1:9,600
10.0	1:12,000
16.7	1:20,000

\* indicates the practical limit for aerial methods - for scales above this line, ground methods are normally used

## 2. Vertical Accuracy:

Vertical map accuracy is defined as the rms error in elevation in terms of the project's elevation datum for well-defined points only. For Class 1. maps the limiting rms error in elevation is set by the standard at *one-third* the indicated contour interval for well-defined points only. Spot heights shall be shown on

<sup>1</sup>see Appendix A., Section A1.

<sup>2</sup>see Appendix A., Section A2.

<sup>3</sup>see Appendix A., Section A3.

TABLE 1M — PLANIMETRIC COORDINATE ACCURACY REQUIREMENT (GROUND X AND Y IN METERS) OF WELL-DEFINED POINTS - CLASS 1. MAPS

PLANIMETRIC (X or Y) ACCURACY <sup>3</sup> (limiting rms error, meters)	TYPICAL MAP SCALE
0.0125	1:50
0.025	1:100
0.050	1:200
-----	
0.125	1:500
0.25	1:1,000
0.50	1:2,000
1.00	1:4,000
1.25	1:5,000
2.50	1:10,000
5.00	1:20,000

\* indicates the practical limit for aerial methods - for scales above this line ground methods are normally used

the map within a limiting rms error of *one-sixth* of the contour interval.

## 3. Lower-Accuracy Maps:

Map accuracies can also be defined at lower spatial accuracy standards. Maps compiled with limiting rms errors of twice or three times those allowed for a Class 1. map shall be designated Class 2. or Class 3. maps respectively. A map may be compiled that complies with one class of accuracy in elevation and another in plan. Multiple accuracies on the same map are allowed provided a diagram is included which clearly relates segments of the map with the appropriate map accuracy class.

## 4. Map Accuracy Test<sup>4</sup>:

Tests for compliance of a map sheet are optional. Testing for horizontal accuracy compliance is done by comparing the planimetric (X and Y) coordinates of well-defined ground points to the coordinates of the same points as determined by a horizontal check survey of higher accuracy. The check survey shall be designed according to the Federal Geodetic Control Committee (FGCC) [FGCC, 1984] standards and specifications to achieve standard deviations equal to or less than *one-third* of the "limiting rms error" selected for the map. The distance between control points (d) used in the FGCC standard for the design of the survey shall be the horizontal ground distance across the diagonal dimension of the map sheet.

Testing for vertical accuracy compliance shall be accomplished by comparing the elevations of well-defined points as determined from the map to corresponding elevations determined by a survey of higher accuracy. For purposes of checking elevations, the map position of the ground point may be shifted in any direction by an amount equal to twice the limiting rms error in position. The vertical check survey should be designed to produce rms errors in elevation differences at check point locations no larger than *1/20th* of the contour interval. The distance (d) between bench marks used in the FGCC standard for the design of the survey vertical check survey shall be the horizontal ground distance across the diagonal of the map sheet. Generally, vertical control networks based on surveys conducted according to the FGCC standards for Third Order provide adequate accuracy for conducting the vertical check survey.

<sup>4</sup>see Appendix A., Section A4.

Discrepancies between the X, Y, or Z coordinates of the ground point, as determined from the map and by the check survey, that exceed *three* times the limiting rms error shall be interpreted as blunders and will be corrected before the map is considered to meet this standard.

The same survey datums, both horizontal and vertical, must be used for both the project and the check control surveys. Although a national survey datum is preferred, a local datum is acceptable.

A minimum of 20 check points shall be established throughout the area covered by the map and shall be distributed in a manner agreed upon by the contracting parties<sup>5</sup>.

Maps produced according to this spatial accuracy standard shall include the following statement in the title block:

THIS MAP WAS COMPILED TO MEET THE ASPRS  
STANDARD FOR CLASS 1. MAP ACCURACY

If the map was checked and found to conform to this spatial accuracy standard, the following statement shall also appear in the title block:

THIS MAP WAS CHECKED AND FOUND TO CONFORM  
TO THE ASPRS  
STANDARD FOR CLASS 1. MAP ACCURACY

- the discrepancies are normally distributed about a zero mean
- the standard deviations in the X and Y coordinate directions are equal
- sufficient check points are used to accurately estimate the variances

To compute the "circular map accuracy standard" (CMAS) which corresponds to the 90% circular map error defined in the NMAS [ACIC, 1962, p. 26, p. 41]:

$$\text{CMAS} = 2.146 \sigma_x \quad \text{or;} \quad \text{CMAS} = 2.146 \sigma_y$$

Given these relationships and assumptions, the limiting rms errors correspond approximately to the CMAS of 1/47th of an inch for all errors and related scales indicated in Table 1E. For the metric case indicated in Table 1M, the CMAS is 0.54 mm for all rms errors and corresponding scales. It is emphasized that for the ASPRS Standard, spatial accuracies are stated and evaluated at *full or ground scale*. The measures in terms of equivalent CMAS are only approximate and are offered only to provide a comparison to the National Map Accuracy Standard of CMAS of 1/30th inch at map scale.

## APPENDIX A. EXPLANATORY COMMENTS

### A1. Root Mean Square Error

The "root mean square" (rms) error is defined to be the square root of the average of the squared discrepancies. In this case, the discrepancies are the differences in coordinate or elevation values as derived from the map and as determined by an independent survey of higher accuracy (check survey). For example, the rms error in the X coordinate direction can be computed as:

$$\text{rms}_x = \sqrt{(D^2/n)}$$

where:

$$D^2 = d_1^2 + d_2^2 + \dots + d_n^2$$

d = discrepancy in the X coordinate direction

$$= X_{\text{map}} - X_{\text{check}}$$

n = total number of points checked on the map in the X coordinate direction

### A2. Well-defined Points

The term "well-defined points" pertains to features that can be sharply identified as discrete points. Points which are not well-defined (that is poorly-defined) are excluded from the map accuracy test. In the case of poorly-defined image points, these may be of features that do not have a well-defined center such as roads that intersect at shallow angles [U.S. National Map Accuracy Standards, 1941]. In the case of poorly defined ground points, these may be such features as soil boundaries or timber boundaries. As indicated in the ASPRS Standard, the selection of well-defined points is made through agreement by the contracting parties.

### A3. Relationship to U.S. National Map Accuracy Standards

Planimetric accuracy in terms of the "limiting rms error" can be related to the United States National Map Accuracy Standards (NMAS) provided the following assumptions are made:

<sup>5</sup>see Appendix A., Section A5.

### A4. Check Survey

Both the vertical and horizontal (planimetric) check surveys are designed based on the National standards of accuracy and field specifications for control surveys established by the Federal Geodetic Control Committee (FGCC). These standards and specifications [FGCC, 1984] are intended to establish procedures which produce accuracies in terms of relative errors. For horizontal surveys, the proportional accuracies for the various orders and classes of survey are stated in Table 2.1 of the FGCC document and for elevation accuracy in Table 2.2. These tables along with their explanations are reproduced here. From FGCC [1984]:

#### "2.1 HORIZONTAL CONTROL NETWORK STANDARDS

When a horizontal control is classified with a particular order and class, NGS certifies that the geodetic latitude and longitude of that control point bear a relation of specific accuracy to the coordinates of all other points in the horizontal control network. This relationship is expressed as a distance accuracy, 1:a. A distance accuracy is the ratio of relative positional error of a pair of control points to the horizontal separation of those points.

TABLE 2.1 — DISTANCE ACCURACY STANDARDS

Classification	Minimum distance accuracy
First-order.....	1:100,000
Second-order, class I....	1: 50,000
Second-order, class II....	1: 20,000
Third-order, class I.....	1: 10,000
Third-order, class II.....	1: 5,000

" A distance accuracy, 1:a, is computed from a minimally constrained, correctly weighted, least squares adjustment by:

$$a = d/s$$

where

a = distance accuracy denominator

s = propagated standard deviation of distance between survey points obtained from the least squares adjustment

d = distance between survey points"

## “VERTICAL CONTROL NETWORK STANDARDS

When a vertical control point is classified with a particular order and class, NGS certifies that the orthometric elevation at that point bears a relation of specific accuracy to the elevations of all other points in the vertical control network. That relation is expressed as an elevation difference accuracy,  $b$ . An elevation difference accuracy is the relative elevation error between a pair of control points that is scaled by the square root of their horizontal separation traced along existing level routes.

TABLE 2.2 — ELEVATION ACCURACY STANDARDS

Classification	Maximum elevation difference accuracy
First-order, class I . . . . .	0.5
First-order, class II . . . . .	0.7
Second-order, class I . . . . .	1.0
Second-order, class II . . . . .	1.3
Third-order . . . . .	2.0

“ An elevation difference accuracy,  $b$ , is computed from a minimally constrained, correctly weighted, least squares adjustment by

$$b = S/\sqrt{d}$$

where

$d$  = approximate horizontal distance in kilometers between control point positions traced along existing level routes.

$S$  = propagated standard deviation of elevation difference in millimeters between survey control points obtained from a least squares adjustment. Note that the units of  $b$  are (mm)/ $\sqrt{(\text{km})}$ .”

For an example of designing a check survey (selecting an order and class), assume that a survey is to be designed to check a map which is intended to possess a planimetric (horizontal) “limiting rms error” (see Table 1E. of the map standard) of one foot and a contour interval of two feet. In contrast to survey accuracies, which are stated in terms of relative horizontal distances to adjacent points, map features are intended to possess accuracies relative to all other points appearing on the map. Therefore, for purposes of the check survey, the distance between survey points ( $d$ ) is taken as the diagonal distance on the ground across the area covered by the map. According to the FGCC survey standards this is the distance across which the “minimum distance accuracy” and “maximum elevation difference accuracy” is required (see Table 2.1 and 2.2 of the [FGCC, 1984] document).

For the planimetric check survey, assume that the diagonal distance on the ground covered by the map is 6000 feet. The propagated standard deviation ( $s$ ) required for the check survey is one-third of the limiting rms error of one foot or 0.33 foot in this example. Returning to the equation from the FGCC [1984] document relating distance between survey points ( $d$ ), standard deviation ( $s$ ) and distance accuracy denominator ( $a$ ):

$$a = d/s = (6000 \text{ feet})/(0.33 \text{ feet}) = 18,182$$

By referring to Table 2.1 of the FGCC document, it is clear that a control survey designed according to the standards and spec-

ifications for *second-order, class II* is required to produce the horizontal check survey for this example. If the project control survey is conducted at a standard of accuracy equal to or better than second-order, class II, the check survey can tie to the project control network in accord with FGCC standards.

For the vertical check survey, the distance ( $d$ ) is also taken as a diagonal ground distance across the map to account for the fact that elevation accuracy pertains to all mapped features. The propagated standard deviation in elevation ( $S$ ) is required by this standard to be equal or less than 1/20th of the contour interval of two feet;

$$S = (1/20) CI = 0.10 \text{ feet}$$

Returning to Table 2.2 of the FGCC document, relating distance between bench marks ( $d$  in km), the standard deviation in elevation ( $S$  in mm), and the elevation difference accuracy ( $b$ );

where;

$$S = 0.10 \text{ feet} = 30.5 \text{ mm}$$

$$d = 6000 \text{ feet} = 1.818 \text{ km}$$

then;

$$b = s/\sqrt{d} = 28.1 \text{ mm}/\sqrt{\text{km}}$$

It is clear that a third-order survey for elevation differences is more than adequate for purposes of conducting the check survey for this map example. Other methods for conducting the check survey for elevation are acceptable provided they have demonstrated accuracy capability equal to that required by this map standard. Such departures however must be agreed upon by the contracting parties prior to conducting the survey.

### A5. Check Point Location

Due to the diversity of requirements anticipated for any large-scale special purpose or engineering map, it is not realistic to include statements that specify the spatial distribution of check points designed to assess the spatial accuracy of the map. For instance, it may be preferred to distribute the check points more densely in the vicinity of important structures or drainage features and more sparsely in areas that are of little or no interest. Of course suitable notation, such as a change in map class for the region of lesser interest, should be included accordingly on the map sheet.

For a map sheet, however, of conventional rectangular dimensions, intended to portray a uniform spatial accuracy over the entire map sheet, it may be reasonable to specify the distribution. For instance, given the minimum of twenty check points, it could be specified that at least 20% of the points be located in each quadrant of the map sheet and that these points be spaced at intervals equal to at least 10% of the map sheet diagonal.

## REFERENCES

- Bureau of the Budget (1947), “United States National Map Accuracy Standards”, U.S. Bureau of the Budget, June 17
- ANSI (1982), “Procedures for the Development and Coordination of American National Standards”, American National Standards Institute, 1430 Broadway, New York, NY 10018, Sept. 1, 1982
- Federal Geodetic Control Committee (1984), “Standards and Specifications for Geodetic Control Networks”, Federal Geodetic Committee, Sept.



## Annual Report Geographic Information Systems Division

The creation of the GIS Division was officially announced in a memorandum from Executive Director William D. French dated 23 November 1988. The division director is Dr. Russell G. Congalton of the Department of Forestry and Resource Management at the University of California—Berkeley. Ms. Kass Green has won the recent election for deputy director. The first official meeting of the GIS Division was held at the Baltimore Convention on 5 April from 3-5 pm.

The GIS Division has already been hard at work preparing for its first official meeting. In October of 1988 an outline describing the objectives, organization, and relationship to the other divisions was approved by the Division Directors. At GIS/LIS '88 a sign-up list was provided at the ASPRS booth for those interested in joining the division. In addition, Director Congalton was busy meeting with those members interested in serving as committee chairs in the GIS Division. Finally, in early January the language for describing the GIS Division on the new membership application was finalized. At this time, work



*Geographic Information System Division meeting.*

is continuing on recruiting the best committee chairs and members to insure that the GIS Division will be adequately staffed to quickly meet the needs of our members.

— Russell G. Congalton, Director, GIS Division

## Annual Report Joint GIS/LIS Committee

### *Charge:*

- Identify joint need and areas of common interest GIS and LIS need and recommend specific tasks and actions.
- Coordinate joint GIS and LIS activities between the Societies.
- Carry out specific tasks as approved by the ASPRS and ACSM Boards in an annual charge to the Committee.
- Cooperate with ASPRS and ACSM headquarters staff for any Committee publicity and communications to our members and the general public.
- Provide a focus for coordination of GIS and LIS activities with outside organizations.

### *Membership:*

- Co-chairs, one each from ASPRS and ACSM as approved by the ASPRS and ACSM Boards respectively.

### *1989 Charge:*

- Complete Glossary of Terms (Ken Dueker).
- Complete Database Guidelines (Bob Burch).
- Prepare recommendations for future action for presentation to the Boards in Cleveland.

## Annual Report Geographic Information Management Systems (GIMS) Committee SUBCOMMITTEE SUMMARIES:

### *Programs*

The GIS/LIS '89 workshop is being held 29 November - 1 December in Orlando, Fla. One-half day programs are being planned for Applications and Multipurpose Cadastre Subcommittees at the Baltimore and Cleveland conventions.

### *Publicity*

All subcommittees are urged to contribute articles/reports for the GIMS newsletter. Paul Durgin is the new Subcommittee Chairman. He is working on exchanging newsletters with IAAO and others.

### *Multi-Purpose Cadastre*

The Glossary of Terms (definitions) contract was finalized and payment made to Portland State University (Ken Dueker). The glossary will be printed and distributed as a report from the GIMS committee, then a committee will be created to review any comments and study the "low consensus items" before publica-

tion. This report will be forwarded to ASCE who is currently working on an update to the "Definitions of Surveying and Associated Terms" prepared by a joint committee of ACSM and ASCE for possible inclusion. A one-half day session is being prepared for Baltimore, being coordinated with the Programs Subcommittee chairman.

### *Publications*

Two publication projects are currently underway. These are: 1) a new compendium entitled "Fundamentals of Geographic Information Systems." The publication of the compendium is expected to be in 1989. This book will bring together a world-wide collection of recent articles on GIS concepts and should be useful as a university text or as a reference volume for individuals using a GIS.

### *Standards*

The Database Guidelines are currently being prepared by headquarters. A galley must be edited before final publication.

### Applications

A one-half day session is being prepared for the Baltimore convention, being coordinated with the Program Subcommittee Chairman.

### Systems and Techniques

No report - chair vacant.

### Vendors and Users Group

Subcommittee Chairman Connie Wester is currently developing questionnaires for users' groups concerning their relationship with vendors. A report will be available at the Baltimore convention.

### Education

A special session on GIS education and training, sponsored by GIMS, ILI and ICA is scheduled for the Baltimore convention with six speakers.

### Other

1. During an interim GIMS meeting held in January 1989, in Denver, Colo., plans began for a series of tutorial video tapes depicting development of a GIS. The first tape will be an overview tape (10-15 minutes long) targeting management level (decisionmaking) people as well as legislators and politicians. It will target both local and state levels — anyone concerned with funding the development of a GIS. It may be possible to work with other professional societies, such as URISA, who are planning to do the same thing. Funding and a storyboard for the initial tape was also discussed. All committee chairs are involved in the first video tape.

2. The GIMS Committee will send a liaison to the newly formed ASPRS GIS Division to be headed by Dr. Russ Congalton.

3. Liaisons from professional societies continue to be solicited for participation in the GIMS Committee activities. The liaison members have been helpful in planning our committee activities.

— Billie C. Swenson, ASPRS/ACSM Co-Chairman



GIMS Committee meeting.

## Annual Report ASPRS Education Committee

The formal committee membership now stands at 20 members, with representation from 3 of the 5 ASPRS Divisions, and at-large members chosen to be liaison persons with various ASPRS and non-ASPRS committees. New education committee members will be solicited from the Primary Data Acquisition and GIS Divisions.

### Committee Activities at 1988 Annual Meeting

\* Cosponsored the "Joint ACSM/ASPRS Forum for Educators."

\* Held an ASPRS Education Committee meeting.

\* Held an ACSM-ASPRS Joint Education Committee meeting.

\* Participated in Student Affairs Committee Meeting.

### ASPRS Education Committee activities March 1988 to March 1989

\* Ralph Kiefer completed a "Survey of Photogrammetry and Remote Sensing Education Programs and Courses in the United States and Canada." The report contains information on courses in 237 departments at 103 universities in 50 states and 8 provinces. A follow-up survey is planned for 1989.

\* Dan Civco is preparing an annotated list of textbooks and reference publications dealing with visual and quantitative remote sensing. The bibliography is designed to provide remote sensing educators information on a number of alternative textbooks that might be used in a remote sensing curriculum. Approximately 35 texts have been reviewed to date. A near-final draft report will be available at the April 1989 ASPRS/ACSM meeting for review by the education committee and consideration for publication by ASPRS.

\* John Morgan is preparing a survey of Geographic Information System courses at universities and colleges in the United States and Canada. To date he has received 250 responses from a mailing to 700 departments. He plans to recontact those departments that have not yet responded and will be contacting some new departments. He anticipates a completed report in midyear (possibly June).

— Ralph W. Kiefer, Chairman, Education Committee



Education Committee meeting.

## Annual Report Student Affairs Committee

The ASPRS Student Affairs Committee met at the Annual Convention in 1988 and approved a Student Questionnaire to be



*Student Affairs Committee meeting.*

mailed to students. The purpose of the questionnaire was to determine the level of knowledge students have concerning the Society as well as to determine what services students would like to see provided. The Student Affairs Committee will meet again in Baltimore to try to analyze the results of the survey.

An Open Student Meeting will be held Wednesday, 5 April 1989 for all students interested in working on the committee and to give general information to students.

I have been in touch with Phil Mobley concerning the Student Program to be held on Tuesday, 4 April 1989. Speakers have been invited as well as company representatives. Students will have a pan pizza party after the meeting. Phil has really done a great job in setting everything up!

An update of the scholarships and awards offered by the regions is provided — this information will be published in *PE&RS* sometime this summer.

— Pat Northcutt, Chairperson, Student Affairs Committee

## Annual Report Joint Government Affairs Committee (JGAC)

The following report has been prepared by the ASPRS representatives on the committee at the request of the ASPRS Executive Committee at their September 1988 meeting in Virginia Beach.

### I BACKGROUND

We believe the value of the ASPRS/ACSM JGAC is well documented and accepted by all interested parties in both organizations. On behalf of both organizations it has provided valuable counsel and guidance to the legislative branches of the Federal and many state governments on legislative matters affecting the surveying and mapping professions.

There has been discussion since 1981 as to what constitutes an equitable dollar contribution from ASPRS to the activities of the committee. The Joint Committee, since its founding, has had an operating budget developed and administered by ACSM. Presumably, because ASPRS did not provide significant input into the development of the budget, the contributions by ASPRS have not been related to a percentage of the budget. The operating budget for the committee has increased from \$75,000 in 1982 to \$159,000 in 1988. The contribution of ASPRS has remained essentially flat for most of this period at \$25,000.

### II COMMITTEE STRUCTURE

(1) There are eight (8) voting members on the committee: Two members from ASPRS, two members from ACSM, two members from ACSM-NSPS, one member from ACSM-ACA and one member from ACSM-AAGS.

(2) Chairman of the committee is one of the two representatives of ACSM-NSPS on the committee.

(3) There are three nonvoting members on the committee:  
Joint Government Affairs Director  
Executive Director of ASPRS  
Executive Director of ACSM

### III DISCUSSION OF ASPRS REPRESENTATION AND PARTICIPATION ON THE JGAC

At the 2-4 December 1988 meeting of the committee in San Antonio, Texas, there was a discussion of the concerns expressed in the letter of 14 October 1988, from ACSM President James Clapp to the ASPRS Board of Directors and the responding letter

from ASPRS President Alden P. Colvocoresses. As a result of the discussion, the committee agreed on the following:

(1) The overall budget of JGAC should be an item on the agenda for the JGAC spring meeting in Baltimore. (At present the ACSM staff prepares and approves the budget without input from the committee members.)

(2) Yearly budget, and in particular budget increases, should be approved by the Executive Committees of ACSM and ASPRS.

(3) A percentage participation guideline should be agreed upon and established by the Societies.

(4) To be effective as a representative of the Surveying and Mapping professions, it is important that the committee remain a joint committee of the Societies.



*Joint Government Affairs Committee meeting.*

### IV ASPRS REPRESENTATIVES RECOMMENDATIONS

(1) We would recommend as a goal a 25% budget by ASPRS. This would be in proportion to our representation on the committee. Also, it is believed that this percentage is close to the proportions of the members engaged directly in Surveying and Mapping.

(2) For 1989 it is recommended that our support be increased from \$25,000 to \$30,000 as a first step in reaching the goal of 25% support.

— Richard Crouse, Sr., Chairman, JGAC

## Annual Report Membership Committee

The membership report consists of three parts. Part I gives a five-year analysis of the ASPRS membership totals. Part II summarizes membership promotion activities and results for the year 1988. Part III explains what the Membership Department plans to do for 1989.

### Part I

There has been an increase in membership every year, with the largest increase occurring in 1988. The biggest reason for this strong increase is the development of GIS and ASPRS targeting this GIS market.

### Part II

ASPRS's total individual membership as of 12/31/88 was:	
Active Members (includes Emeritus and Honorary)	6666
Student Members	1345
Total	8011



*Student Program.*

In 1988, several promotions were done to increase the membership in ASPRS. A short description of each of those promotions, and the results of each are discussed below.

- The "Get a Member Get a Mug" promotion succeeded in increasing the membership by 252 members. The promotion is officially over, however, we still have about 20 mugs left over that we are sending to the first 20 people who endorse an application in 1989.
- The "half-year membership" promotion that was sent to people on the ASPRS prospect list in June 1988 resulted in an additional 213 members. The promotion had a 7% return rate.
- In July the "unpaid 1988" promotion was sent to 781 people who had been members in 1987 but did not rejoin ASPRS in 1988. Thirty-one members rejoined as a result of this promotion. The return rate was 4%.
- A "14th month" promotion was sent to prospects in August 1988. The prospects came from the ASPRS prospect list which consisted of 4,125 people. Unfortunately, the prospect list had 133 bad addresses on it. At the end of 1988, 212 people had joined ASPRS as a result of this promotion. The return was 5%.
- The "Region Membership Promotion" has so far brought in 26 new members. Because the funds for this promotion did

not become available to the Regions until late July, the program is being extended to June 30, 1989.

### Part III

Plans for 1989 include the following promotions:

- Already, the January 1989 issue of *PE&RS* includes a membership page that explains the benefits of ASPRS membership, and gives details about the ASPRS Divisions. Extra copies of the January issue, and separate printed pages have been ordered to use for membership promotion in 1989.
- A new application is being designed for 1989. The application will include Division descriptions, and a section for people to check off the committees they would like to volunteer for. This new application also reflects the increase in postage costs for foreign addresses.
- The Membership Department is in the process of collecting mailing lists from other organizations to use for a large "prospect promotion" to be developed for a March mailing or to be used for "half-year" promotion scheduled for May. Details about the promotion have not been finalized yet.
- A reenrollment survey is currently being developed. The survey will be mailed to all members on 15 March 1989. Once the surveys are returned, the membership records will be updated with current addresses, occupations, Division preferences, etc.
- The Membership Committee is currently putting together a map of the US on which all ASPRS members are being plotted by zip code. The map will show us the geographic distribution of the membership, and will give us an idea of where clusters of membership are concentrated. These clusters of members can then form ASPRS chapters, and plan chapter activities. These chapters are necessary in those large Regions that are spread over several states.
- In April 1989, an "unpaid 1989" promotion will be sent to any person who was a member in 1988 but did not rejoin for 1989 to encourage those people to continue their ASPRS membership.
- In September, another 14th month promotion will be planned. Again, this will offer two months of free membership in ASPRS.
- A new "get a member" promotion will be planned in 1989. The new program will have the same basic idea of encouraging members to get other people to join ASPRS. However there will be a new theme/reward planned for the promotion.

Please feel free to call on me at any time. New ideas and suggestions are always welcome and appreciated.

— Camille Millburn, Membership Services Manager



*Membership Committee meeting.*

## ASPRS Voluntary Certification Program

SINCE THE ASPRS VOLUNTARY CERTIFICATION PROGRAM was established by the ASP Board of Directors in 1975, 568 individuals have been designated "Certified Photogrammetrists (ASPRS)."

Background, requirements, and procedures of the Certification Program are contained in the *Certification Brochure* which, along

with application forms, can be obtained from ASPRS Headquarters.

A complete roster of Certified Photogrammetrists and their present affiliations are printed below. Individuals are asked to provide the Society with appropriate information should any changes need to be made.

### Certified Photogrammetrists (ASPRS)

#### *Name and Affiliation*

#### A

ACOSTA, Nestor D., Precision Aerial Surveys, Inc.  
 ADAMS, Keith P., Lockwood Mapping, Inc.  
 ADAMS, Farrell R., Arkansas State Hwy. Trans. Dept.  
 ADKINS, Lonnal L., Photo Science, Inc.  
 ALLEN, Raymond R., National Park Service  
 ANDERSEN, Norman C., PRC Government Info. Systems  
 ANDERSON, Edgar C., Kenting Earth Sciences, Ltd.  
 ANDERSON, James M., University of California, Berkeley  
 ANDERSON, Larry A., US Army Corps of Engineers  
 ANDREWS, Daniel S.  
 ANSON, Abraham, Consultant  
 ANTHONY, Jack R., Montana Dept. of Highways  
 ARRIAGADA, Carlos S., C&C Aerial Mapping  
 AUST, Harry L., Aust Aerial Mapping  
 AVILA, Vincente E., Universidad Central Quito

#### B

BABER, James J., Omax Biosensing  
 BACKHAUS, Ralph E., US Army Corps of Engineers  
 BACKLUND, Oliver, Alaska Dept. of Transportation  
 BAILEY, James W. Sr., Carolina Aerial Mapping Service, Inc.  
 BAILEY, John P., Greenwood & Associates  
 BAKER, Darrel L., Wild Heerbrugg Instruments  
 BAKER, Donald G., Ayres Associates  
 BAKER, William O., Michael Baker Jr., Inc.  
 BALL, Robert Montague, Southern Resource Mapping Corp.  
 BARG, William H., The Sidwell Company  
 BARTON, Duane, Benatec Associates  
 BEAZLEY, Jon S., Jon Beazley, P.E.  
 BECIA, Enzo, Retired  
 BECKER, Jon E., Florida Dept. of Transportation  
 BECKOM, Terry L., Hoffman & Company, Inc.  
 BENESH, Milosh, Calif. Inst. of Tech., Jet Propulsion Laboratory  
 BENNETT, Howard C., David K. Nale, ADR Associates  
 BENTLEY, Ivan D., Valley Aerial Mapping Service, Inc.  
 BERRINGTON, Trevor, Intrasearch, Inc.  
 BERRY, Carl M. Jr., Walker & Associates, Inc.  
 BHAWANI, Binisain, Airborne Systems, Inc.  
 BILU, Joseph, Williams-Stackhouse, Inc.  
 BLACKBURN, Dewayne L., Atlantic Aerial Surveys, Inc.  
 BLACKWELL, Robert C., San-Lo Aerial Surveys  
 BLASQUEZ, Carlos H., NASA Kennedy Space Center  
 BLEVINS, Hugh E. Jr., Engineering Drafting School  
 BORSJE, Gerard, Michael Baker Corporation  
 BOUNDS, G. Clement, USGS, Reston, VA  
 BOYAJIAN, Michael M., Aerial Cart. Tech. Inc.  
 BROCK, Robert H. Jr., SUNY College of Env. Science & Forestry  
 BROONER, William G., Earth Satellite Corporation  
 BROWN, William E., Span International, Inc.  
 BRUNZIE, Leroy, Mid-States Engineering, Inc.  
 BUDGE, Thomas K., University of New Mexico  
 BURGOS, Nicolas L., VTN Consolidated, Inc.

BURNS, Joseph P., Joseph P. Burns, P.E.  
 BURTCH, Robert, Ferris State College  
 BURTON, Frederic C. II, Topographic Data Consultants, Inc.  
 BUSTOS, Carlos, Aerial Topographic Maps  
 BUTLER, Raymond, Raymond Butler & Associates  
 BYRNE, Jack M.  
 BYRNE, Raymond, Lockwood Mapping, Inc.

#### C

CADZOW, William S., Cadzow Consultant, Inc.  
 CAMPO, Hugo R., Piedmont Aerial  
 CAREY, James Robert, Benatec Associates  
 CARLEN, Jeffrey G., US Army  
 CARTWRIGHT, Vern W., Cartwright Aerial Surveys, Inc.  
 CASH, Jimmie R., Tobin Research, Inc.  
 CASSIDY, Wayne L., James H. Bell, P.C.  
 CAUDELL, Eugene S., Caudell-Gaylor, Inc.  
 CENOVICH, Eric, Western Air Maps  
 CERESA, Thomas J., L. Robert Kimball & Associates  
 CHAMARD, Roger R., E. Coyote Enterprises, Inc.  
 CHANG, Wu-Kuang, Intergraph Corporation  
 CHULIVER, Mario O., Aerial Data Reduction Assoc. Inc.  
 CIVIDINI, Italo, Air Survey Corp.  
 CLAPP, H. Cornell, Southern Resource Mapping Corp.  
 CLARK, Jonathan R., US Remote Sensing Center  
 CLARK, Malcolm N., H.G. Chickering & Green Empire, Inc.  
 CLEMENTS, William E., CIA  
 CLEMONS, Robert R., E-Systems  
 CLEVELAND, Don, M.J. Harden Associates, Inc.  
 CLOUT, Robert, N.S.W. State Public Works Dept.  
 COCKING, Albert V., Advanced Digital Maps, Inc.  
 COE, Eugene R., Col-East, Inc.  
 COFFEY, Richard K., Hoskins-Western-Sonderegger, Inc.  
 COLE, Bradley A., Air-land Surveys, Inc.  
 COLLINS, James, GEO/HYDRO, Inc.  
 COLVOCORESSES, Alden P., US Geological Survey  
 COMBS, John E., Air Survey Corp.  
 COMER, Clarence E., Southwest Florida Water Mgmt. District  
 CONINGHAM, S. Brett, Bovay Engineers, Inc.  
 CONNORS, Richard R., Kucera & Associates, Inc.  
 COUCH, John W., Wyoming Hwy. Dept.  
 COX, John L., Asia Mapping Inc.  
 CRABTREE, James W., J.E. Combs Air Survey  
 CRANDALL, Clifford J., Consultant  
 CRISCO, Wallace A., US Bureau of Land Management  
 CROOM, Charles H., US Geological Survey  
 CROUSE, Richard G. Sr., Photo Science, Inc.  
 CRYSTAL, Roger E., US Forest Service  
 CUARTEROS, Camilo D., Nigerian Federal Survey School  
 CUBBERLEY, Jo Ann, Dept. of Environmental Protection  
 CUMMING, William T., Detroit Edison Company  
 CURRY, Sean, Highland Measurement Systems Ltd.  
 CURTIS, Gerald C., Kenting Earth Sciences

**D**

DANKO, Joseph O., Jr., Danko Arlington, Inc.  
 DANNER, Charles S., Sr., Danner & Associates, Inc.  
 DANNER, Charles S., Jr., Danner & Associates, Inc.  
 DAVIS, Jean L., American Aerial Surveys, Inc.  
 DAVIS, Richard B., Richard B. Davis Company, Inc.  
 DAYKIN, Vernon G., Lockwood Mapping, Inc.  
 DEAKIN, Ronald, Camosun College  
 DeGROSS, Gerrie E., George F. Walker & Associates  
 DELAHANTY, Gerard L., L. Robert Kimball & Associates  
 DELAHANTY, Joseph T., Precision Aerial Surveys, Inc.  
 DENNY, R. Steven, Barge, Waggoner, Sumner & Cannon  
 DENNY, Robert F., Defense Mapping Agency  
 DERMAN, Gordon R., Avis Airmap, Inc.  
 DICKSON, Ronald A., US Dept. of Agriculture, ASCS  
 DILDINE, Gerald S., North Carolina DOT  
 DINH, Can, Ohio Dept. of Transportation  
 DIMA, Elena, Quinn & Associates  
 DODGE, Richard K., US Forest Service  
 DORRESTIJN, Bertus, U.A.M., Inc.  
 DOYLE, Frederick J., US Geological Survey  
 DOZZI, John, Horizons, Inc.  
 DRAGER, Dwight L., National Park Service  
 DRAKE, Ronald L., Wilson & Co., Eng. & Arch.  
 DRELICH, Edward J., VEP Associates, Inc.  
 DULL, Charles W.  
 DUMONT, Francis A., John Hilske & Associates, Inc.  
 DUTHWEILER, Sue A.  
 DYROFF, Pete, Kenney Aerial Mapping Inc.

**E**

EATON, Gary D., Cardon Systems Corporation  
 EBERT, James Ian, Consultant  
 EDMONDS, Walter L., SAIC  
 EDWARDS, George J., University of Florida  
 EDWARDS, Larry J., AeroMetric Engineering  
 ELGHAZALI, Mohamed S., Kuwait University  
 ELLIOTT, Robert H. Jr., Western Div. Eng. Command, USN  
 ELLIS, James T., North Carolina Forest Service  
 ELLIS, Tony J., K&T Enterprises  
 EMILIUS, Paul J., Geod Corporation  
 EMRICK, Harry W., Colorado School of Mines  
 ERFLE, Melvin E., Delta Aerial Surveys, Inc.  
 ESTRIN, Stephen A., Stephen A. Estrin Inc.  
 ETHRIDGE, Max M., NOAA  
 EVANS, Barry M., Resource Technology Corporation  
 EVANS, L. Richard, Consultant  
 EVANS, Robert P., Southwest Fl Water Mgmt District  
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## Annual Report Evaluation for Certification Committee

This year there were 46 new certified Photogrammetrists added to the rolls of the Society. Thirty-one added were from 1988 applicants and 15 carryovers from 1987. In 1988, 4 applications were received and processed and final action recommendations made on all but seven that are still in the review process. Deferred or rejected applicants for the last two years has been 21.6%. Average review time after the application was received by

the Committee's Secretary was 3.5 months a new record for responsiveness by the Committee.

In November I presented a Paper on the ASPRS Certification program at the American Water Resources Association Annual meeting in Milwaukee, Wisconsin. The session featured other speakers who discussed their Certification programs. We will borrow ideas from those other organization in a minor way. All the others that are in the certification process spend large amounts of money and are not as responsive to applicants as we are.

With the interest in the use of Certified Photogrammetrists by contracting agencies and others, it appears that this committee will have to work with the Professional Practice Division this year to try to breakdown Certification Categories more appropriate to applicants special skill area. This activity will start at the Spring Meeting.

— R.R. "Sky" Chamard, Chairman  
 Evaluation for Certification Committee



*Certification Committee meeting.*

## Annual Report Inter-Society Liaison Committee (ISLC)

The ISLC has completed its third year of activity and Dr. Charles K. Paul, the first Chairman, has completed his term of office. Dr. Paul should be commended for his leadership in the creation and development of this committee, which has resulted in the adoption by the ASPRS Board of a model agreement for affiliation with other societies; contacts and relationships with several societies; and active involvement in planning for an ISPRS-1992 meeting.

Several new committee members have been recruited to continue the work of the Committee. Committee officers for the period of March 1989 through March 1991 will be:

Chairman: Lawrence R. Pettinger  
Vice Chairman: Stanley A. Morain  
Secretary: Dario Rodriguez-Benjarano

### Final Report of Outgoing Chairman

This memorandum will serve as my last official report as Chairman of the ASPRS Inter-Society Liaison Committee. Mr. Lawrence Pettinger takes over as Chairman effective 1 January 1989. I am in the process of transferring my files of the Committee to him. Dr. Stanley A. Morain will take over as Vice-Chairman on the same date, and a new member, Dr. Dario Rodriguez-Benjarano, becomes our new Secretary.

First, I would like to say that it was an honor for you, Larry, and Stan to ask me to take charge of forming this new committee three years ago, in December, 1985. I have enjoyed serving as Chairman of this vitally important Committee over the past three years. I would like to take this opportunity to review for you some of the accomplishments of the Committee, as measured against our goal and objectives, and the Society's Long Range Plan.

**MEMBERSHIP GROWTH:** Stan, Larry, and I developed the Goal and Objectives for the Committee as the first order of business. In summary form, the objectives are:

1. Relationships with other societies
2. Joint meetings
3. Wide exposure for ASPRS
4. Sharing of information
5. Global expansion of profession
6. Technology transfer
7. Policy development

With these objectives in mind, we recruited three additional members during 1986 who could contribute to our efforts in achieving them. During the last few months of 1988, we have successfully recruited seven new members to the committee. The membership now stands at thirteen, all of whom share the desire to contribute to the objectives of the committee and have the international experience to relate successfully to other societies working in the mapping science.

**ISPRS 1992:** One of the committee's most noteworthy accomplishments has been our contribution in helping secure the vote for the hosting of the 1992 Meeting of the International Society for Photogrammetry and Remote Sensing (ISPRS). This was accomplished through our Committee working with

Specific activities for the committee during the coming year will be identified at the Committee meeting on 4 April 1989, in Baltimore. Priority areas will include:

1. Intensifying efforts to develop cooperative relations and joint programs with other societies.
2. Activities support for the ISPRS-1992 meeting.
3. Considering strategies to promote the use of remote sensing/photogrammetry within appropriate professions through professional society cooperation.

We invite review of our activities by Board members, and would welcome suggestions about specific cooperative activities with other societies that might evolve through your contacts with ASPRS Regions or Divisions.

— Lawrence R. Pettinger, Chairman,  
Inter-Society Liaison Committee

Lawrence Fritz' ISPRS planning committee. Subsequent involvement with the planning for ISPRS 1992 will further our Committee's efforts to achieve objective # 1: relationships with other societies.

**JOINT MEETINGS:** The subject of joint meetings is included in objective 2, as well as fulfilling the ASPRS Long Range Goal # F 1.2. Our Committee invited the Environmental Research Institute of Michigan (ERIM) to participate in the 1988 St. Louis Annual Meeting of ASPRS/ACSM. We arranged with the Meeting organizer for ERIM to receive exhibit space free of charge. ERIM has since invited ASPRS to exhibit free at the International Symposia on Remote Sensing of the Environment. This exchange and interaction with ERIM have been challenges for ASPRS for almost two decades.

In addition, our Committee and the American Society for Civil Engineers (ASCE), Engineering Applications of Remote Sensing (EARS) Committee, conducted a joint session at the ASPRS Fall Meeting in Reno in 1987. The theme was "Remote Sensing Applied to Global Issues."

Your Chairman has been one of the major players in the International Space Year (ISY) efforts. Although my role has been official in my capacity with the Agency for International Development (AID), I have taken every available opportunity to involve ASPRS in the planning for this supposedly major space event. You and others in ASPRS have attended several NASA-chaired



*Inter-Society Liaison Committee (ISLC) meeting.*

meetings on ISY and have had the opportunity to bring to the attention of Federal decision-makers the tremendous role that ASPRS can play in ISY. ASPRS has been able to communicate with the American Institute of Aeronautics and Astronautics (AIAA) regarding joint planning for ISY, and we have built the ISY theme into our planning for ISPRS 1992. Indeed, the ISY angle probably helped us to a great extent in securing votes for our hosting of ISPRS 1992. The ISY connection will need continuing work under Larry Pettinger's chairmanship. This pursuit is compatible with our objectives: 3. wide exposure for ASPRS, 4. sharing of information, and 5. global expansion of profession.

**COOPERATIVE AGREEMENT:** Our committee has successfully developed a model cooperative agreement which is intended to be used in establishing formal relationships with other professional societies. After several iterations, the ASPRS Board of Directors approved the draft of the Agreement at the Fall Meeting this year (1988) in Virginia Beach. ASCE is reviewing this draft at the Aerospace Division level before it proceeds to headquarters. The Canadian Remote Sensing Society has approved the draft in principle, but is awaiting its Board's official approval. This is an item that the incoming Chairman Larry Pettinger should follow up on.

We have developed a separate, shorter version of an agreement which is now in effect between ASPRS and the Canadian Institute of Surveying and Mapping.

Board approvals for both of these Agreements go a long way in our Committee's reaching objective # 4. sharing of information, since the Agreements authorize ASPRS to share journals and other resources with these societies. Also, the cooperative Agreement addresses ASPRS Short Term Goal F 1.2.1.

**CONCLUSION:** The Inter-Society Liaison Committee has developed quickly over the past three years, establishing a new international framework for the Society with a goal and objectives that are probably universally shared by the ASPRS membership. Its involvement with other important committees in the Society is

indicative of its ability to interject in important professional issues and make rapid contacts throughout the Society, other professions, and the Federal government. We need to do more in the way of joint sponsorship of technical sessions, both at our meetings as well as at meetings of other professional societies. We need to establish formal liaisons and get the Cooperative Agreement signed with other societies, especially ASCE and the Society of American Foresters. And finally, we need to get more involved with special studies and policy development as they affect the direction of ASPRS and the development of the sciences of surveying, mapping, photogrammetry, remote sensing, geodesy, cartography, and geographic information systems.

It has been my fortune to have served the Society during the last three years as Chairman of the Inter-Society Liaison Committee. I feel that the Committee has a membership with the breadth of experience and insight to make the Society even more known throughout the world through other professional societies that share our interest. I will remain as dedicated as before in assisting the Committee as ex-Chairman, and will help Larry in whatever way I possibly can as he takes charge of the Inter-Society Liaison Committee.

— Charles K. Paul, Outgoing Chairman,  
Inter-Society Liaison Committee

## Annual Report Awards Committee

The Committee met on 3 April 1989. Attendees were Camille Millburn, ASPRS Staff; Morris Thompson, ASPRS Altenhofern Scholarship Chm.; Rupert Southard, ASPRS W.A. Fischer Scholarship Chm.; William G. Hemple, Former Awards Committee Chm.; Judy E. Shrader, ASPRS Staff; Chris J. Johannsen, ASPRS Staff;

Warren R. Philipson, ASPRS Ta Liang Award Chm.; Barrie Levinson, ASPRS Staff; Roger Hoffer, ASPRS President Elect. There was good discussion about all ASPRS Award categories. Some issues identified were:

- No written policy stating "In general no student will receive more than one scholarship or fellowship except in unusual circumstances." Suggest that all Committee Chairman rank their applicants. Then Awards Committee can resolve duplicate applications.
- Need for updating form for applying for ASPRS/ACSM student scholarships/fellowships. Determine if any scholarships

require need as a requirement, if not recommend leaving it off the form.

- Concern was expressed about lack of information sent to University Faculty concerning student awards during this past year.
- Need an award that recognizes GIS papers. Also observed that the John I. Davidson President's Award for Practical Papers is only award for Remote Sensing Papers. Photogrammetry and photointerpretation papers are recognized by other awards.
- V. Talbert Abrams Award is for single-authored papers. Since we are now emphasizing interdisciplinary research, should the donors be approached to change the single-author requirement?
- Interest in developing a Fellow Award for recognizing individual achievements and contributions to the Society. Comments that ACSM uses this category to bring in additional membership funds. Need to obtain their requirements and determine if a nonmonetary award can be developed.
- Need a way of recognizing outstanding contributions of Sustaining Members. Criteria for a Sustaining Merit Award should be developed and considered.
- Monetary Awards should be evaluated and determined if adjustments should be encouraged. It is noted that the Alan Gordon Memorial Award which recognizes individual contributions carries a \$100 monetary Award while awards for papers carry \$200-\$500 Awards.

The above issues indicated that much discussion needs to take place before recommendations are brought to the Board of Directors. It is recommended that a workshop by four to five members of the ASPRS Awards Committee be held to review the awards program and make recommendations toward resolving some of the above issues. The objective of the workshop would be to develop a Society Award Program that furthers the objectives and aims of the Society.

— Chris J. Johannsen, Chairman,  
Awards Committee



*Awards Committee meeting.*

## Annual Report Building Committee

The committee met 24 March 1989 with Ayers, Dorman (ACSM; French, Wright (ASPRS); and Palmerlee (URISA) in attendance. [Note: No representation from AAG.] Also in attendance was Paula Brown (CRE Real Estate Brokers).

Larry Ayers reported his conversation with David Ward (President AAG). The Council of AAG is awaiting a report from their Ad Hoc Building Committee covering four specific areas: (1) cost to repair the current facilities, (2) cost to stay in the DuPont Circle area, (3) cost of going in with our mapping consortium, (4) cost of going in with an anthropological group which has made an offer. The Council was expecting a report from the Ad Hoc Committee this week in Baltimore, receiving none the Council took no action. Due to the (1) lack of action, (2) lack of representative, and (3) time line to meet the above four options, David Ward recommended the consortium move forward without AAG and keep AAG informed of any decisions.

Tom Palmerlee informed the Committee that URISA Board has given him approval to sign a lease for space in the Railway Express Building in downtown D.C. to be executed within the next two weeks. URISA's concern is a need to add staff prior to their August meeting. Therefore, they need to move into a new facility prior to the start of June. With only two months to accomplish said goal, it would be difficult for URISA to change direction and come with the mapping consortium at this time.

ASPRS reported that Executive Committee's tour and their recommendation to the ASPRS representative on the Blue Ribbon Committee. ASPRS expressed concern in going to Alexandria due to the lack of parking and urban environment.

ACSM has a concern of moving to RNRF because lack of productivity due to two moves within a 24-month period as well as additional costs involved. Also, the limit of resale of RNRF property to those who qualify for membership in RNRF is a concern.

Discussion took place on the property located at 360 South Washington Street (not visited by the ASPRS Executive Committee). Following a lengthy discussion and the evaluation of current reality, the Committee took the following actions.

### ACTION PLAN & DEADLINES:

1. ASPRS and ACSM approved an engineering inspection of 360 South Washington Street. Said inspection will take place Monday at 10:00 A.M. with a draft report in the hands of the two societies prior to the Baltimore meeting.
2. The recommendation of the Ad Hoc Committee on Joint Tenancy is that the property located at 360 South Washington would be the best option to put the two Societies together in a common locations. Of course, this recommendation is made with the understanding that if the engineering study uncovers significant problems with the South Washington property reconsideration of this recommendation would be in order.
3. If 360 South Washington either fails the engineering inspection and/or approval of the two Societies' Boards, it is the recommendation of this Committee to continue their search.

— Larry Ayers, Chairman,  
Building Committee

## Annual Report Renewable Natural Resources Foundation (RNRF)

RNRF activities during the past year occurred on several fronts that relate directly to ASPRS. The most important area has been the consideration of the Renewable Natural Resources Center in Bethesda, Maryland as a potential site for ASPRS headquarters relocation. The Center has been identified by the ASPRS Executive Committee as the first-priority choice among the sites evaluated. Among the many positive points noted by the Executive Committee. I believe the most important is the unique opportunity to colocate with RNRF member organizations, and the potential to develop long-term programmatic relationships with many of them who share common interests. Among the other points in favor of the RNRF site, I would highlight the campus-like setting and attractive space; the opportunity to gain equity ownership at an early phase of Center development; cost savings due to real estate and sale tax exemptions for 501 (C)(3) organizations in Montgomery County; and convenience to rapid transit (Metro) and interstate highways (located just off the Beltway). I understand the ASPRS Board will tour the RNRF Center and other candidate sites during the annual convention. I urge your thoughtful consideration of RNRF as the most appropriate location for ASPRS headquarters.

RNRF continues to increase its membership. The Soil and Water Conservation Society is a new member of the Foundation, and other societies are being evaluated. In anticipation of serious consideration of the RNRF Center as a new headquarters for ASPRS and ACSM, a straw vote was taken by the RNRF Board at its annual meeting in December, 1988, to determine if ACSM was qualified for RNRF membership. After discussion of ACSM's pur-

poses, organization, and activities, the vote was unanimous that ACSM would qualify for membership. The Association of American Geographers (AAG), another society considering colocation with ASPRS and ACSM, is already a member of RNRF.

The area of most significant RNRF activity during the past year has been the development of technical programs. Under the Chairmanship of Bob Aangeenbrug (AAG Executive Director), several subcommittees have been established and planning has begun for several programs. A Congressional Forum on Wetland Loss in scheduled for May 24, 1989. This program will provide an overview of several aspects of wetlands loss for members of Congress and their staff. Another program is planned for later in the year that will address management of naturally induced fires on Federal forest and rangelands.

A Round Table on Public Policy has been established as a forum for representatives of member organizations to discuss current natural resources policy issues and pending legislation. Dick Mroczynski, Director of Public Affairs, EOSAT Co., will represent ASPRS at the Round Table. Dick's forestry background makes him well suited to be our representative.

These activities reflect the current emphasis being given to program development at RNRF. I look forward to continuing to represent ASPRS on the RNRF Board, and helping to develop new ways for ASPRS and the other RNRF member organizations to work together more effectively.

— Lawrence R. Pettinger,  
Representative RNRF

## Annual Report

### Ad-Hoc Joint Committee on Convention Site Selection

Because of the growth, evolution, and increased financial significance of conventions, Joint Convention Advisory Committee (JCAC), expressed a need to establish Site Selection Guidelines. Therefore, during the September 1988 JCAC meeting in Virginia Beach, ACSM President Clapp (JCAC Chair) appointed an ad hoc committee "to determine a procedural policy on future convention site selection. The report should be no longer than 4 pages and it will be presented at the next JCAC meeting in Baltimore, MD in March (April) 1989." This ad-hoc committee was also charged to review and make recommendations as needed relating to the number of conventions held by the two Societies.

The Committee consisted of the following:

Richard F. Dorman, Convenor  
William D. French, Secretary  
Mary Clawson, ACSM  
Roger M. Hoffer, ASPRS  
John Hohol, Sustaining Member  
(Selected by  
the Sustaining Members)

Due to travel, Mary Clawson was unable to attend and Patricia Caldwell Lindgren represented ACSM.

The meeting was called to order Monday, 30 January 1989 at the Tysons Corner Marriott in Vienna, Virginia and Roger Hoffer was elected Chair.

#### PURPOSE OF MEETINGS

The Committee reviewed the reasons why ACSM and ASPRS hold Meetings and Conventions.

Meetings are held to:

1. Provide a forum for exchange of ideas and information about the profession.
2. Provide continuing professional development of the individual.
3. Provide financial support to the Societies.
4. Provide for introduction of the latest technological advances.
5. Provide a forum for conducting Society business.
6. Provides an opportunity for students to become familiar with the profession.

These reasons are in no particular order and the committee recognizes that there are other good reasons to hold meetings and encourages the development of procedures to facilitate their conduct and operation.

#### ASSUMPTIONS

The Committee assumed the following:

1. That JCAC will use the site selection criteria to select and recommend future convention sites to the ACSM and ASPRS Boards for approval.

2. That it is the goal of the two Societies to hold the annual meeting during the six-week period from late February to early April.

3. That hosting and coordinating international meetings must be handled on a case-by-case basis.

#### CRITERIA FOR SITE SELECTION

The Committee developed the following criteria as guidelines in selecting future convention sites. These criteria are in order of priority:

##### I Geographic Location (desirability)

- A. Rotation considerations (East-West)
- B. First/Second tier cities

##### 1. Based on independent convention bureau statistics

First Tier Cities	Second Tier Cities
Dallas	San Diego
Atlanta	Orlando
Los Angeles/Anaheim	Tampa
San Francisco	Scottsdale/Phoenix
Chicago	Baltimore
New York	Minneapolis
Boston	St. Louis
New Orleans	Seattle
Washington, DC	Nashville
Miami	Philadelphia
Memphis	Pittsburgh
	Cincinnati
	Denver
	San Antonio
	Kansas City

- C. Climate
- D. Outside Attractions (distractions)

##### II Space Requirements

- A. Ample guest rooms
  1. current requirements: approx. 1,500 for annual meeting
- B. Ample meeting rooms
- C. Ample exhibit space
- D. Proximity and configuration of guest/meeting rooms/exhibits
- E. Quality of space
  1. Attractiveness
  2. Cleanliness
  3. Maintenance of hotels and exhibit facilities
  4. Safety

##### III Accessibility

- A. Transportation methods
  1. Between hotels/meeting rooms/exhibits

- B. Airlines
  1. On major routes
- C. Trains

##### IV Rates

- A. Exhibit Hall rental
- B. Guest room rates
- C. General cost of doing business
  1. Vendor costs, etc. (for exhibitors)

##### V Membership

- A. Regional draw
- B. Local support

##### VI Convention Services

- A. Convention Bureau
- B. Housing Bureau
- C. Registration Staff
- D. Adequate supply of local vendors and contractors

#### RELATED RECOMMENDATIONS

Although somewhat outside the primary charge of the Site Selection Committee, discussion within the committee led to the following recommendations to JCAC:

- ACSM and ASPRS should continue to hold a technically outstanding Annual Convention and Exhibition, but consider holding a Multi-Society Technical Meeting and Exhibition, e.g. GIS/LIS in lieu of the Fall Convention as soon as feasible (i.e. 1990).

This recommendation is made because we have a "window of opportunity" at the present time in relation to the Fall 1990 and 1991 Conventions.

#### ACTIONS RECOMMENDED

The ACSM/ASPRS ad hoc Joint Site Selection Committee recommends that:

1. JCAC adopt the "Criteria for Convention Site Selection" defined in this report and listed in order of priority, as the basis for selection of future convention sites.
2. JCAC recommends that the ACSM and ASPRS Boards of Directors adopt these criteria for future site selection.
3. JCAC consider the "Related Recommendations" of this committee, and take action on these recommendations as appropriate.

*Roger M. Hoffer, Chair; Richard F. Dorman,  
John Hohol, Patricia Caldwell Lindgren, and  
William D. French*

## Annual Report Constitution and Bylaws Committee

The Bylaws Committee met 3 April 1989, at the Hyatt Regency Hotel, Baltimore, Maryland. Members Hemple, Radlinski, and Andregg were present. Donald Kerns, incoming Bylaws Committee Chairman, was also in attendance. Attached is the agenda for the meeting.

The Committee had received from the Chairman, Finance and Administration Committee, a proposed amendment to Article VIII, Section 16, endorsed by five members of the Board of Directors. The proposal provides for altering the structure of the Committee based upon experience in operating the Committee in its initial year. The proposal was reviewed and the Bylaws Committee provides the following amended wording for Article VIII Section 16 for presentation to the Board at the Cleveland Convention in September:

*"Section 16. Finance and Administration Committee*

*The Finance and Administration Committee shall consist of six members including the Vice President and a current or former Director. The Executive Director shall be an *ex-officio*, nonvoting member. The Committee shall undertake such studies as assigned by the Executive Committee relative to the business and financial affairs of the Society and shall prepare recommendations. Special subcommittees may be established under its cognizance as deemed necessary to treat specific problems identified in such studies."*

The intent of the amendment is to provide opportunity for greater continuity in the chairmanship than the one-year term of the Vice President will allow, since many of the problems assigned to the Committee will extend over a longer period. The amendment also recognizes the need to bring additional and specialized help to the Committee in treating some specific problems.

The Executive Director referred to the Bylaw Committee the 16 February 1989 Report of the Professional Conduct Committee (PCC) for action on a recommendation for expanding Article VIII, Section 22 of the Bylaws to include development of standards of

professional conduct and procedures for their consideration by the PCC in professional conduct investigations. The Bylaws Committee provides the following amended wording for Article VII, Section 22b for presentation to the Board for adoption at the Cleveland Convention:

*"b. - The PCC shall be the custodian of the Society Code of Ethics and shall be responsible for preparing and recommending standards of professional conduct and the procedures to be followed in professional conduct investigations."*

The Bylaws Committee noted the requirement for three editorial improvements to be applied to the Society Bylaws of February 1988 in its next printing:

- a - Delete the "Memorandum" on inside front cover (not appropriate after the first printing).
- b - Include in the Bylaws publication the new resolution transferring ASP policies to ASPRS. (Should precede the Articles of Incorporation.)
- c - Delete "NEW" from title on page 3.

The Committee reviewed the procedures for promulgating new bylaws for ASPRS Regions consistent with the new Society Bylaws. It was agreed that Regions could proceed with adoption of new bylaws prepared in accordance with guidance provided without formal approval of the Society Bylaws Committee. The Bylaws Committee should receive any revised bylaws prepared by Regions for review to assure that they are not in conflict with Society Bylaws. The Bylaws Committee will advise Regions of any adjustments required to meet that objective for use in future revisions. Since Society Bylaws apply in any case of differences, there is no need to delay promulgation of Region Bylaws awaiting this review.

— Charles H. Andregg, Chairman,  
Constitution and Bylaws Committee

## Annual Report Professional Conduct Committee

The Committee met in April and October, 1988 to review a case that was brought to its attention; to begin preparation of "Procedures for Professional Conduct Cases" for use by the Society; to discuss various issues and matters pertaining to professional conduct including the preparation of standards for professional conduct; and to make a series of recommendations to the Board of Directors (see below).

Following the April 1988 meeting, the Committee was saddened by the death of one of its members, John I. Davidson. Mr. Davidson, a Past President and Honorary Member of the Society, served this Committee and the Evaluation for Certification Committee with great distinction. His wise counsel and hard work will be greatly missed. His place on the Committee has been taken by Rex McHail, a Past President and Honorary Member of the Society.

The following recommendations are made to the Board of Directors:

1. A resolution should be prepared and approved which would transfer all policies of the ASP to ASPRS, including the Code of Ethics and the Certified Photogrammetrist Program.

2. With regard to the Bylaws, Section 22, Professional Conduct Committee, an article "e" should be added to state "The PCC shall be the custodian of the Society's Code of Ethics and shall be responsible for establishing standards of professional conduct, and/or the preparation of procedures to be followed in professional conduct cases."

3. The ASPRS Code of Ethics should be considered a guide for use by all members of the Society, and that the requirements of the code will be strictly enforced against *all* Certified Photogrammetrists whether or not they are members of the American Society for Photogrammetry and Remote Sensing.

4. The Evaluation for Certification Committee should conduct a study, to include a survey of the value of certification. The PCC would be pleased to assist in this effort.

5. The Society should obtain liability insurance to cover any hearing board that may be convened to hear professional conduct cases if the present Society insurance policy does not provide such coverage.

— A.O. Quinn, Chairman,  
Professional Conduct Committee

## Your Board in Action

The ASPRS Board of Directors met in Baltimore during the 1989 Annual Convention and acted on Society business.

Two new members were elected to serve on the Executive Committee — Paul Hopkins, Director, Central New York Region; and Robert Thompson, Director, Texas/Louisiana Region — to fill the vacancies created by the completion of Charles Andregg's term on the Board and Michael Renslow's resignation due to his move out of the Region.

The Board acted on the following items:

- A revised ASPRS Convention Revenue Sharing Policy was adopted as follows:
    - 20% of the first \$ 5,000
    - 10% of the next \$50,000
    - 5% of the next \$50,000
    - 2% of the balance of the net income from an Annual or
  - Fall Convention be rebated to the host ASPRS Region.
  - The Executive Director was directed to go on record with the Subcommittee on Oversight of the Committee on Ways & Means that ASPRS is opposed to any change in current tax laws pertaining to unrelated business income tax (UBIT).
  - The GIS Division will be asked to appoint a person to represent the Society with the International Association of Assessing Officers in conjunction with the Inter-Society Liaison Committee and in coordination with the Joint GIS-LIS Committee.
  - Endorsed "American the Beautiful? A Conference on Aesthetic Values in the American Landscape" to take place 9-11 April 1990 in Washington DC, sponsored by the American Society of Landscape Architects.
  - Acted to include AM/FM International as an additional sponsor for the GIS/LIS '89 Meeting.
- A set of Guidelines for Convention Site Selection recommended by the Joint Convention Advisory Committee (JCAC) was adopted. The Board is considering holding the 1990 Fall Convention in conjunction with GIS/LIS '90, perhaps in Nashville, Tenn.
- Voted a Resolution of Appreciation to Convention Director Peter Gibson and his staff for an excellent convention.
  - Voted that the ASPRS Code of Ethics should be considered a guide for use by all members of the Society, and that the requirements of the code will be strictly enforced against all Certified Photogrammetrists whether or not they are members of ASPRS.
  - Approved the Joint Agreement between the 27th International Geographical Congress and XVII Congress of the International Society for Photogrammetry and Remote Sensing Organizing Committee, dated 22 November 1988, as interpreted by Alan R. Stevens' letter to James L. Clapp of 6 March 1989. The Joint Agreement provides that ASPRS and ACSM will cohost the 1992 International Society for Photogrammetric and Remote Sensing (ISPRS) Congress which will be held in the Washington DC Metropolitan area in conjunction with our Annual/Fall Meeting in August, 1992.

Additionally, ASPRS & ACSM will cohost the meeting with the International Geographic Union's (IGU) Congress. The current plan is to have a common exhibit, as well as selected shared social functions, technical tours, and spouses' activities. IGC will bring a number of their vendors to the exhibit, but the ASPRS/ACSM Fall Meeting will be responsible for the combined exhibit. It was therefore necessary to negotiate a profit sharing agreement with the IGC which will receive 15% of the net profit/loss from the exhibits with the remaining 85% being shared equally be-

tween ACSM and ASPRS in accordance with standard operating procedures of all our meetings.

- The Joint GIMS Committee was dissolved with much appreciation to that Committee and a Joint GIS/LIS Committee was established.
- The Board approved the following Resolution concerning the Orbital Characteristics of Landsat 6 which was approved by the Joint Satellite Mapping and Remote Sensing Committee and ACSM:

### "Resolution - Orbital Characteristics of Landsat 6

"Whereas this Society of more than 8,000 members is acutely aware of the value of remote sensing and in the importance of continuing the Landsat program with the proposed flight of Landsat 6;

"Whereas this Society has been informed by EOSAT officials that the planned time for equatorial crossing for Landsat 6 is 10:30 am as opposed to the 9:30 to 9:40 am equatorial crossing of Landsats 1 through 5;

"Whereas such a change in orbital characteristics of Landsat 6 has been made without due review by the Landsat user community which is well represented within this Society;

"Whereas the planned time change for equatorial crossing for Landsat 6 may be detrimental to the effectiveness of Landsat data particularly with respect to the large number of users concerned with global change and who have used and expect to use the same relative illumination conditions employed by Landsat for the past 16 years;

"Therefore, This Society recommends that the orbital time for equatorial crossing for Landsat 6 remain the same as it has been for the past 16 years unless a detailed and objective review by the Landsat user community clearly indicates that the change in orbit planned by EOSAT is justified. Furthermore, this Society requests EOSAT and concerned US government officials to insure that such action is taken."

- The Joint Government Affairs Committee's 1989 Objectives were approved as follows:

"Promote the adoption of state and local legislation using the qualifications-based selection procedures set forth in the Brooks Act. Work to assure the proper implementation of the clarification of the Brooks Act to include surveying and mapping enacted in the 100th Congress. Continue to educate federal legislators about the benefits of the Brooks Act qualifications-based selections procedures to prevent any congressional erosion of support.

"Work to assure the proper implementation of the Small Business Competitiveness Demonstration Program and to dissuade any congressional or regulator actions to derail the program.

"Develop and promote an amendment to federal National Infrastructure Development legislation to enable State and local governments to secure loans and grant money for the purpose of developing GIS/LIS system for infrastructure managements. The JGAC will also explore additional legislative vehicles in the 101st Congress to provide seed money to state and local governments to set up land information systems with accurate base reference frameworks.

"Provide technical assistance to Government Affairs Director on the proposed rules from the Office of Pipeline Safety to implement the accurate mapping provisions of the Pipeline Safety Reauthorization enacted in the 100th Congress.

"Monitor congressional efforts to reduce the budget deficit. Inform membership of any budget deficit proposals including any revenue enhancement measures which could negatively impact

the profession and initiate member grassroots involvement such as the elimination of mortgage interest tax deduction.

"Continue efforts to educate users to the value of the State Legislative Clearinghouse Program. Work to assure a viable transition to a user-supported program.

"Work to implement the legislative recommendations developed by the Ad Hoc Committee for inclusion in the Federal Land Information Study.

"Monitor the FY 90 funding for Landsats 4 and 5 and the Administration policy review of the Landsat Program."

- Approved the following two amendments to the ASPRS Bylaws to be published in *PE&RS* for membership review; amended wording to Article VIII, Section 16, Finance and Administration Committee and to expand Article VIII, Section 22, to include development of standards of professional conduct and procedures for their consideration by the PCC in professional conduct investigations:

### "Article VIII, Section 16

"The Finance and Administration Committee shall consist of six members including the Vice President and a current or former Director. The Executive Director shall be an ex-officio, non-voting member. The Committee shall undertake such studies as assigned by the Executive Committee relative to the business and financial affairs of the Society and shall prepare recommendations. Special subcommittees may be established under its cognizance as deemed necessary to treat specific problems identified in such studies."

### "Article VIII, Section 22

"(b) The PCC shall be the custodian of the Society Code of Ethics and shall be responsible for preparing and recommending standards of professional conduct and the procedures to be followed in professional conduct investigations."

The following requirements for editorial changes will be applied to the ASPRS Bylaws in next printing:

1. Delete the "Memorandum" on inside front cover; not appropriate after the first printing.
  2. Include in the Bylaws publication the new resolution transferring ASP policies to ASPRS. (Should precede the Articles of Incorporation.)
  3. Delete "NEW" from title on page 3.
- While ASPRS joins with ACSM in publicizing our joint support for the professional recognition implicit in Brooks Bill procedures in government procurement of surveying and mapping professional services, the Board of Directors adopted a Resolution indicating no support for the JGAC request for authority to initiate a Brooks Act protest. Copies of the Resolution were distributed to ACSM and government agencies. The policy appears below:

"Response to JGAC Request for Authority to Initiate Brooks Act Protest

"The important accomplishment of the JGAC in achieving recognition for the professional status of surveying and mapping by the Brooks Bill clarification is recognized and applauded. ASPRS should join with ACSM in publicizing our joint support for this professional recognition implicit in Brooks Bill procedures in government procurement of surveying and mapping professional services.

"It should be recognized, however, that differences in interpretation of Brooks Bill provisions may arise between private practitioners and government entities who are both part of the profession represented by our Societies. When these differences lead to protest action by a private practitioner member, it is imperative that our Societies refrain from supporting either side. The Societies should remain neutral but make sure that there is no uncertainty about the Societies' support for Brooks Bill provisions for treating procurement of professional surveying and mapping services.

"For that reason ASPRS cannot support the JGAC recommendation for ACSM-ASPRS participation in protest actions as proposed in the JGAC report."

- The Society ended 1988 with expense over income of \$3,523. No additional reserve funds were invested during the year. However, \$75,000 has been budgeted for the Reserve Fund in 1989.
- Approved the 1989 Revised Budget of \$2,156,900 Income and \$2,098,200 Expense. The budget for the support of the Joint Government Affairs Committee has been increased from \$25,000 to \$30,000. For the first time the 1989 Budget contains the gross income and expense from the Annual and Fall Conventions. Prior to 1989 only the net income and expense for the Conventions was budgeted.

The most exciting and important decision facing the Board of Directors at this time is finding a new home for the ASPRS Headquarters. During its meeting in Baltimore, the entire Board of Directors made a site inspection of the two finally selected locations at 360 Washington Street, Falls Church and Renewable Natural Resources Foundation in Bethesda, Maryland.

The Board unanimously voted a preference for the RNRF property; however, the Ad Hoc Building Committee was requested to negotiate the final and best offers on the two properties so that the Board would be in the position to decide which of the two properties would be best for ASPRS.

This decision should be made by the end of May, prior to the printing of this article. The membership will be informed immediately.

The Society will be in the position to purchase the property of its choice because our individual and corporate members are supporting the Building Fund Campaign. These contributions are invested in a separate, restricted ASPRS Building Fund bank account and the funds are growing towards our goal of \$500,000.

The Board of Directors voted commendations for outstanding service to the following outgoing Directors:

Charles H. Andregg, Director, Florida Region, 1981-1989

Enzo Becia, Director, Alaska Region, 1978-1989

Jack E. Staples, Director, Latin America Region, 1978-1989

There was a special commendation voted for John J. Graham, immediate Past President of ASPRS, for his efforts on the Executive Committee and as an officer of the Society. He has provided good counsel and invested a lot of time in conjunction with the 1992 ISPRS Congress and been very instrumental in making the ASPRS Building Campaign a success.

The ASPRS Officers and Directors are your representatives. Let them hear from you so they may represent your needs and act on your behalf.

— Florence G. Stevenson  
Assistant Executive