

# HOOSIER SURVEYOR

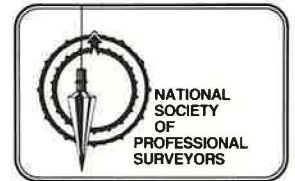


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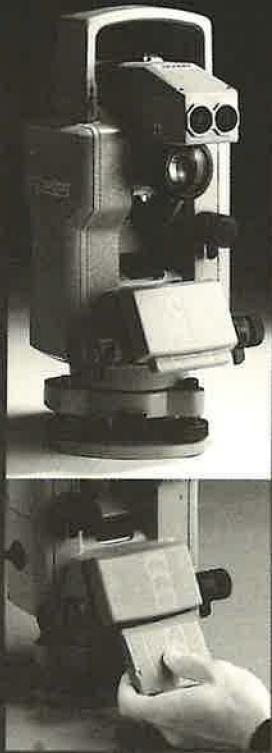
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**Professor Kenneth S. Curtis  
Presented  
"Sagamore of the Wabash"  
by Representative Sheila Klinker  
on behalf of  
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Also in this issue:  
1992 Convention Review  
ACSM/ASPRS 1991 Fall Convention  
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Report on Purdue Activities  
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317 687-8859

**EDITOR'S NOTE**

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Editorial Advertising Offices  
55 Monument Circle, Suite 1222  
Indianapolis, IN 46204  
(317) 687-8859

Ken Curtis - Editor  
317 494-2165 Office  
317 463-7452 Home

Mike Crawford - Assistant Editor  
317 872-8400 Office  
317 842-5814 Home

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**HOOSIER SURVEYOR**

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## PRESIDENT'S THOUGHTS

by Randy Sexton, ISPLS President, Kendallville, IN

Greetings to all of you from your new president. First and foremost, I would like to thank all of you for placing your confidence in me and allowing me to be your spokesperson for this year. I hope you will share all of the excitement that I do. I was so glad to see the separation of the registration boards, however, I see this as just the beginning of the many very important things that we must accomplish in the future.

Continuing education for all registered land surveyors that are licensed by the State of Indiana must be implemented immediately. The first step that we must complete in order for this idea to become a reality is to develop and implement a good voluntary continuing education program. Thanks to the Professional Development Committee, we now have a good program to implement. Now it is up to you, the practitioner, to assist your society by volunteering to participate in the program, so we can test it before presenting it to the State Registration Board and the state legislative government. Soon you will be receiving information on the various workshops that are planned for this year. A portion of the fee that is being charged for these workshops will be set aside in order for this new voluntary program to be tested and implemented. It is the plan of your board of directors, that no funds from the operating budget or charges to the voluntaries will be needed. Please participate in the program and give us your feedback so we can improve upon the program that we have developed.

Education is the key to the future of this profession that we all love so very much. Therefore, I am pleased to inform you that in the near future you will have the opportunity to attend a traveling workshop. The first topic will be the use of Rule 13 in conjunction with route surveys. This workshop is currently scheduled to take place on March 19 & 20 in Indianapolis, Indiana. Then our speakers will roam the state from North to South giving 3 workshops on the new updated Rule 13 and how it affects you. Please plan to attend for Rule 13 is no longer a voluntary program, but a law. Also as in the past, it is our policy to encourage all chapters to host workshops to assist ISPLS and the local chapter in educating all professional land surveyors. The Northwest Chapter is going to host a workshop on the "Legal Responsibilities of the Land Surveyor" on April 24 in Valparaiso, Indiana.

The 1992 Annual Convention was once again a great success in that our attendance was the best ever and all signs show that our membership will expand as we develop all of the programming that is currently on the drawing boards of our committees. Please look at the committee list found in this Hoosier Surveyor in order to find the committee that you are on. If your name does not appear on this listing I encourage you to call the office and express your interest in being placed on a committee. Also my phone number is listed and I will gladly talk to anyone who has a concern about ISPLS or our profession within the state. The convention next year will be a first for us in that it will be a joint disciplinary convention to be held in March 1993 at the Adams Mark Hotel in Indianapolis, Indiana. Once again this will show the need for separate registration but needed interaction with all of the other professions that we constantly interact with.

Recently an article in Money magazine (Feb 1992) was brought to my attention in which 100 occupations were ranked. It was very disturbing to me to find that the surveyor was ranked 93rd. It is my opinion that we belong to one of the best professions and it is very important that we present that opinion to the general public through all of our actions. I hope you feel the same way. I am challenging you through our public relations committee to participate in your local career days and to sponsor a trig star in your area. Be proud of your profession and you will command respect from other professionals and the general public. Take a little time and reread the Canon of Ethics that you were sworn to uphold.

In closing, I would like to wish you a good and prosperous year and look forward to seeing or hearing from as many of you as possible. Please participate for ISPLS is your society and we cannot accomplish your goals without you.

"The real secret of success is to find out what you like to do best—and concentrate all of your energy in doing just that."

—O.A. Battista in QUOTE

## REGISTRATION BOARD HAPPENINGS

### REVISED LAND SURVEYING EXAMINATIONS SCHEDULE

The Indiana State Board of Registration has received word from the National Council of Examiners for Engineering and Surveying (NCEES) that effective with the October 1992 examinations some changes/revisions will be implemented in the land surveying examinations. These are the result of a major Task Analysis and subsequent recommendations by the Committee on Examinations for Professional Surveyors (EPS).

- 1) The Fundamentals of Land Surveying (FLS) will be an eight-hour closed-book examination administered in two four-hour sessions. The examinations will contain 170 items, with morning and afternoon tests being equal with 85 items each.
- 2) The Principles and Practice of Land Surveying (PLS) examination will be a six-hour open book examination administered in a four-hour morning session and a two-hour afternoon session. The examination will contain 50 items in the morning and 25 in the afternoon."

Since Indiana participates in using the above NCEES-generated uniform examinations and the PLS-2 afternoon test is being reduced from three hours to two hours, the Indiana Board has decided that, beginning with the October 1992 exam, the Indiana jurisdictional exam will be extended from a one-hour to a two-hour exam. This Indiana exam covers state-specific statutes, rules and regulations, local practice, and is prepared by the Indiana State Board. The present one-hour format has had some criticism concerning the lack of sufficient time to cover the subject adequately.

"...The purpose of the NCEES shall be to provide an organization through which State Boards may act and counsel together to better discharge their responsibilities in regulating the practice of engineering and land surveying as they relate to the welfare of the public in safeguarding life, health and property."

In reviewing the development of examinations, the NCEES Director of Examinations, J. Earl Herndon, has explained that the basis for all examinations begins with a task analysis. The Council attempts to test skills and knowledges that are practiced at the entry level. The task analysis is a mammoth undertaking at

great expense citing the recent engineering task analysis (1990) and the surveying task analysis (1991). Task analysis for both professions are repeated every five to ten years or sooner if there are changes in the practice. From the results of the task analysis survey, The Council builds a matrix as to what knowledges will be tested on any particular examination. After items are entered into the bank, the committees meet and based on the matrix and specifications for that examination, they actually build examinations.

In a recent issue of the NCEES REGISTRATION BULLETIN, William L. Karr (LS, Michigan), president of NCEES, reported, among other items, that "the Committee on Surveying Education met on November 8-9, 1991. Their charge was to finalize a curriculum for surveying and work on accreditation in a single ABET commission. To aid in their work, representatives from two of the ABET commissions were at the meeting. This committee has very interesting recommendations and conclusions. Their final report will be of interest to everyone."

### BOARD-ORDERED SUSPENSION REVERSED

In the Fall 1989 issue of the HOOSIER SURVEYOR (Vol. 16, No. 2) a story reported that the Indiana State Board of Registration for Professional Engineers and Land Surveyors had indefinitely suspended the licenses of Ralph Wallem, LS, and William Kimbley, PE, as the result of a hearing held on a complaint filed by ISPLS. The allegations and the Board's conclusions and final order were discussed in the above cited issue of the newsletter. Mr. Kimberly was subsequently reinstated by the Board. Mr. Wallem appealed the Board's decision to a court of law (Dubois County Circuit Court) and on February 1, 1990 the court reversed and set aside the Board's suspension and directed the Board to reinstate the license and registration of Mr. Ralph Wallem. This was done by the Board as ordered by the court.

## BOARD OF DIRECTORS MEETINGS

September 21 & November 9, 1991 & January 15, 1992

by Mike Crawford, reporter

The Board of Directors of the Indiana Society of Professional Land Surveyors held meetings on September 21st and November 9th, 1991 and January 15, 1992. Among items addressed were the following:

September 21st:

Acceptance of a petition to charter a local chapter in South-Central Indiana. It was subsequently named the Hoosier Hills Chapter.

Authorization was given to enter into a written agreement to participate in the 1993 joint convention.

It was noted that Wendall Raney, of the licensing agency, investigates complaints filed against surveyors. The role of the ISPLS in such procedures was discussed.

The Professional Development Committee presented its plans for an evaluation program. The program was returned to the committee with comments which were then acted upon. It was recommended that the revised document be presented to the general membership at the annual convention in Columbus.

A motion was made and passed to suspend part of the current code of ethics regarding competition until it could be reviewed and a new code adopted.

November 9th:

It was announced that 66 people attended the Fall Workshop in Brown County. A profit of \$326.24 was realized from the event.

A Spring Workshop will be sponsored by the Northwest Chapter.

It was recommended that the 1994 convention (a joint venture with Kentucky) be held in Louisville.

A motion was made and passed to accept the report of the Nominations Committee that Doug Herendeen had been elected to the office of President Elect.

And, Jerry Carter reported that Jerry Ginthner had been hired as the Qualifications Based Selection Facilitator.

January 15th:

Ross Holloway reported on a meeting with Dr. Vincent P. Drnevich and Dr. Edward M. Mikhail. At this meeting a discussion was held on how the Society might support the various programs the professors are involved with.

Roger Woodfill made a motion to direct the By-Laws Committee to prepare a draft addressing the issue of how the Student

Chapters should fit into the Society's By-Laws. This motion was passed.

A meeting was set for February 6th to get the 1993 Convention Committee going.

A motion was made and passed to accept the request of the Northwest Chapter to sponsor the 1995 convention.

Dianne Bennett reported that the 1993 Fall Workshop will be held at Turkey Run State Park.

A motion was made and passed to accept the report of the Nominations Committee that Don Bengel, David Blankenkemper, and Chris Marbach had been elected as Directors. Their terms will run from 1992 through 1994.

The Indiana Historical Landmarks Committee reported that it will hold a meeting in late February and that they are working on the easement for the witness tree.

During the various Board meetings membership applications were reviewed and accepted for:

L. Edward Rinehart, Jr. (member), Gregory W. Buckel (member), Joseph B. Stoddy, Jr. (member), Jon Robert Monies (member), Steven L. Murray (member), Peter P. Massa (member), Warren James Sudhoff (member), Richard Lee Fidler (member), David K. Mills (member), William Lee Maurer (member), John M. Irr (member), Kevin Wayne Rowland (junior), Louis George Machlan (junior), Scott D. Zeigler (junior), Robert H. Runyan (associate), Ryan C. Wischart (student), Karen Denise Bell (student), Jeffery P. Powell (junior), Jess A. Gwinn (junior), Douglas J. Henderson (junior), Charles G. Hawrys (junior), Gregory M. Thomas (junior), Patrick Manship (junior), James R. Wheatley (student) Brent A. Friend (student), John H. Stephens, RLS Inc. (firm), Robert Hutchinson (member), William D. Brown (member), Eugene J. Chudzynski (member), Jack R. Haberlin (junior), Robert B. Berling (junior), and Charles D. Graham (student).

Also, on January 15th an organizational meeting was held for the 1992 Board of Directors. Rich Hudson was appointed to fill the remainder of Doug Herendeen's term as director. Doug will be serving the Board as President/Elect. Don Bengel was elected to the office of Vice President. The position of Secretary will be filled by David Blankenkemper. E.R. Gray will serve as Treasurer. A motion was made and passed to accept the resignation of Rollyn Blankenkemper from the Board. Tom Boofter will fill the remainder of Rollyn's term.

## 40TH ANNUAL CONVENTION OF THE ISPLS

January 15-17, 1992 - Columbus, Indiana

by Mike Crawford

We were told that there is a place where "The Discovery Continues" and being a group that is blessed with a keen sense of direction and an innate ability to read a map we found that place in Columbus, Indiana. It was here beginning on January 15th that those attending the 40th Annual Convention of the Indiana Society of Professional Land Surveyors launched a voyage of discovery which took its bearing from our past, explored our present, and charted our future.

On the opening day of the convention a Rule 13/Registration Board panel discussion was held before a packed room. Pat Cunningham led off the discussion with an overview of the Board's goals for the near future. These included: continuing education requirements, a four year surveying degree for license requirement, and enforcement of Rule 13. Pat noted the changing nature of our profession as the impetus for the consideration of the first two goals. No timetable for implementing these requirements was announced but later, at the annual business meeting, a plan for a Voluntary Professional Development Program was introduced which could serve as the model for a mandatory continuing education program in the future. On the subject of enforcement, Pat related that the Board had recently voted to suspend the license of an individual for violation of Rule 13 and this represented the second time such action had been taken since Rule 13 came into effect. This was followed by a list of particular violations which have resulted in registration suspension and an illustrated example of what those violations look like on a plat. Following a brief recess the full panel, made up of Michael Feldbusch, Pat Cunningham, Ross Holloway, Gary Kent, and Wes Day, fielded questions from the audience.

Wednesday evening the Exhibit hall was opened for a "Fun Festival". The 27 exhibitors kept their booths open and many offered door prizes. Sandwiches, pasta, various munchies, and liquid refreshment were available so that one could eat and drink while strolling among the exhibits. As the evening came to a close Orwic Johnson was ably assisted by a clown in distributing door prizes and kazoos.

Several hardy souls braved Thursday morning's sub-zero temperatures or at least found the strength to leave their warm beds in the hotel to attend the Professional Land Surveyors P.A.C. Annual Breakfast. Bill Schreiber, executive assistant to the speaker of the Indiana

House of Representatives, was the guest speaker. Mr. Schreiber, who "tolerates government in order to play politics", gave us some insights into several of the state and federal races and campaign financing. He also discussed how the Democratic party came from being the losers in redistricting 10 years ago to the architects of house redistricting this time around. Regardless of one's politics the breakfast was most enlightening and the proceeds went to support a worthy cause, the voice of our profession in the halls of government.

The remainder of Thursday and Friday morning were devoted to workshops which offered a wide variety of subjects. The sessions included: Optical Tooling in Machinery Setting by Robert Bigelow, Surveying a Hazardous Waste Site by William Hayes, Conducting Effective Meetings by John Rumble, a panel discussion on the Business of Land Surveying, CAD and Land Surveying by Jerry Carter and many more. While the number and quality of these activities may seem impressive it is only half the story because running concurrently was the spouses program. The spouses were involved in activities ranging from a Swedish Massage Demonstration to a slide show "Preview of Your Spring Garden". Time for tours and shopping was also scheduled.

Thursday evening billed as "an evening of light entertainment and socializing" became something more as the Purdue Student Chapter hosted a reception for Professor Ken Curtis. It was noted that Professor Curtis' service to the profession extends beyond the halls of academia where he has labored for 44 years. In fact, our Society exists today thanks in large measure to Ken's organizing efforts back in 1951 and his continuing contributions through the years. Professor Curtis brought us the welcomed news that his retirement later in the year should allow him time to engage in some writing. Histories of the Society and the Purdue Surveying program are possible topics.

The Annual Business meeting of the society was held on Friday afternoon. President Ross Holloway called the meeting to order at 2 p.m. In addition to the standard committee reports an update on the status of the Qualifications Based Selection program was given. Ross, also, opened a discussion on the scholarship funds. Concern was expressed about the rate of return earned by the endowments which fund the scholarships, especially the one administered at Purdue, and about the lack of



control ISPLS can exercise in the administration of the endowments. At the recommendation of the Ad Hoc committee, which had been studying the situation, all funds received for scholarships have been placed in a separate bank account. After addressing these and other matters of Society business the meeting was adjourned.

Friday night was a time of celebration. It was a time to enjoy good food, good company, and good entertainment. It was also a time to recognize some of the individuals who have contributed to the success of our Society. The entertainment came from the Boggstown Inn and Cabaret. The rousing jazz and banjo music was highlighted by the cameo appearance of Professor Curtis on stage in his musical debut. The evening continued with the presentation of awards. Honorary ISPLS memberships were given to Ruthann Sumpter, Vice Chairman of the State Board of Registration, and to Representative Sheila Klinker. The Different Drum Award went to Ken Curtis. The recipients of Presidents Special Service Award were: Pat Cunningham, Jake Hall, Wes Day, Doug Herendeen, and Sheila Klinker. Finally a very special form of recognition was given to Professor Ken Curtis as Representative Klinker presented Ken with the proclamation naming him a Sagamore of the Wabash. This is the highest award issued by the governor of the State of Indiana and is reserved for those individuals who have made outstanding contributions to the state.

This was also the time to recognize those people who made our voyage of discovery possible and so pleasant. This able group working under the title of Convention Committee consisted of: General Chairman-Orwic Johnson; Exhibits-Roger Walton; Program-E.R. Gray; Arrangements-Brian Scott Crowder; Registration-Perry Cloyd and Danny Rice; Spouse-Kathy Gray and Betty Johnson; Able and Willing Assistants-Chuck Coyle, Jon R. Monies, Becky Coyle, and John Wright; and Video Taping-Chris West.

The final order of business was to pass the mantle of leadership. Ross Holloway's name was added to the list of Past Presidents and Randy Sexton became the new President of the ISPLS. With the swearing in of the 1992 Officers and Directors the 40th Annual Convention of the Indiana Society of Professional Land Surveyors came to a close.

**Safety Is A Condition  
Of Employment**

## SPOUSES DISCOVER COLUMBUS

by Kathy Gray

This year the spouses program was focused on learning and discovering while socializing at the same time.

Programs on stress, fitness, horticulture, swedish massage and doll history was planned for everyone to enjoy.

We started on Wednesday with the Bartholomew County Wellness program motivating the group, they even had us doing a few stretches. After breathing out the bad stress and breathing in the good stress everyone was ready to learn the skill of giving a swedish massage. Margaret Cunningham was the lucky volunteer for the massage and was envied by all. I hope by now everyone has shared what they learned with their willing partners.

After breakfast at the Visitors Center and a tour of the Irwin greenhouses we snuggled in for a tour of Columbus architecture before stopping for lunch at the Cummins building. Everyone was ready for afternoon tea after an hour of shopping at the Fair Oaks Shopping Mall. However, we were amazed at how much Gloria Hall could shop in such little time. Gloria did promise shopping lessons for anyone interested. After listening to violin music at the Empire Tea Room in the Old Columbus Inn, there was plenty of time to visit, or possibly win a door prize being donated by local Land Surveyors.

By Friday spring was in the air after our program on Planning Your Spring Garden by Pam Wienantz. We decided to wait though, before running out to the nurseries, until Emily Shireman gave her program on the history of dolls. Good thing to, before it was over, everyone was thinking back to the days of their own childhood experiences. Ending up the day with a delicious lunch at Lemleys Bistro and an afternoon of their choice.

A special thank you goes to Betty Johnson, Becky Coyle, and JoAnn Wright for all their great hostessing with the spouses.

It was a pleasure having all of you in Columbus!



## A TRIBUTE TO PROFESSOR KENNETH S. CURTIS

On Thursday evening, January 16, 1992 at 7:30 p.m. Professor Ken Curtis was recognized by members of I.S.P.L.S., former students, and current students at a reception sponsored by the student chapter of I.S.P.L.S./A.C.S.M. at the Holiday Inn, in Columbus, Indiana during the 1992 convention. Professor Curtis had announced during the fall semester of 1991 that he had decided to retire from Purdue University after 44 years of dedication to the school. At the reception Gary Kent read a letter that was written to Ken from John McEntyre, who was not able to attend.

Ken is a highly respected man whom many are quite proud of and will be strongly missed at the university. He is sincere and has always been devoted to his students. He takes us under his wing, so to speak, and keeps us informed and on the right track in our studies and our plans for practicing the profession. Ken has devoted his life to the improvement of the profession.

Thank You Ken!

Bradley Ott

December 18, 1991

Dear Ken,

Congratulations on your pending retirement! We are saddened to see this day approaching; however, we urge you to enjoy a more relaxed and less-busy lifestyle.

Your life is a history of service to the surveying profession. I personally know of no one who has given more to the profession. It is impossible for your peers in the United States, and particularly in Indiana to express adequately our appreciation for your contributions to surveying. Surveyors have great respect, admiration and love for you. You are held in high esteem, nationally and statewide, by your peers.

You are the person most responsible for the Indiana Society of Professional Land Surveyors being the successful society that it is today. You were its co-founder in 1953. You were the driving force that kept it a meaningful activity for surveyors in Indiana during the decades of the fifties and sixties. You were its executive secretary, newsletter editor, corresponding secretary and general handy-man during that period. We are especially grateful for at least 17 annual meetings that you planned

and managed during this growing period for I.S.P.L.S. You gently nudged and encouraged members to participate until the society could function on its own in the decade of the seventies. We thank you for making I.S.P.L.S. available for us.

You have insisted that a university degree is necessary for one to become a competent land surveyor in today's society. Your paper "The Case of the Missing Curriculum" published by the American Society of Civil Engineers" made a lasting impression on the national scene. Your efforts were responsible for the establishment of a program leading to the Bachelor of Science Degree in Land Surveying at Purdue University in 1971. You also recognized the need for advance education and research in an area and were responsible for the establishment of a graduate program in surveying in the School of Civil Engineering at Purdue University, in 1963. You acquired faculty, highly competent and respected in their specialty, to teach in the graduate program. We thank you for these extremely important contributions to education in the surveying profession.

You are a strong advocate for continuing education in one's profession. Your well-planned annual meetings helped surveyors in Indiana keep abreast of developments in the surveying area. You conceived the idea of a "traveling roadshow" where the same workshop was given in several locations to allow more surveyors to attend it. You participated in four of these presentations, consisting of approximately thirty-five presentations in the four years that this activity was presented. We thank you for your making continuing education activities more possible for us.

You yourself have made a constant effort to stay abreast with technical and equipment advancements in the surveying field. You also kept abreast of non-technical activities of other state societies and national organizations. You kept in touch, technically and non-technically, by attending annual meetings (national and other states) and self-study. We thank you for helping us keep in touch with the many aspects of the surveying profession by these efforts. Furthermore we thank you for being a positive ambassador-at-large for I.S.P.L.S. We wish Mary Lou and you many happy years in this retirement period of your life! I close with my love and best wishes.

John McEntyre

## PROFESSOR CURTIS NAMED "SAGAMORE OF THE WABASH"

### SAGAMORE OF THE WABASH

Professor Ken Curtis started teaching at Purdue University in 1948. With his retirement this year, he completes his 44th year of service to the land surveying profession. During that period, Professor Curtis established himself as one of the outstanding leaders in the profession both in Indiana and across the United States. His contributions both in the area of surveying education and to the general body of knowledge have had a profound impact on the development of surveying from the engineering step-child of the 1950's to the dynamic profession of the 1990's. In appreciation and recognition of his many contributions, Governor Bayh is hereby naming Professor Kenneth S. Curtis a "Sagamore of The Wabash".

Representative Sheila Klinker



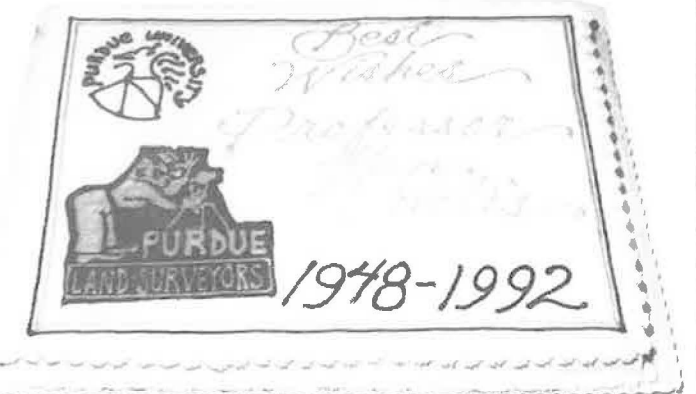
Ken Curtis and Mary Lou Curtis at the Student Chapter Reception, held during the convention on Thursday evening.

*The Sagamore of the Wabash award was created during the term of Governor Ralph Gates, who served from 1945 to 1949. Governor Gates was to attend a tri-state meeting in Louisville with officials from the states of Ohio and Kentucky. Aides to the governor discovered that the governor of Kentucky was preparing Kentucky Colonel certificates for Governor Gates and Senator Robert A. Taft, who was to represent the State of Ohio. The Hoosiers decided Indiana should have an appropriate award to present in return.*

*The term "Sagamore" was used by the American Indian Tribes of the northeastern United States to describe a lesser chief or a great man among the tribe to whom the true chief would look for wisdom and advice.*

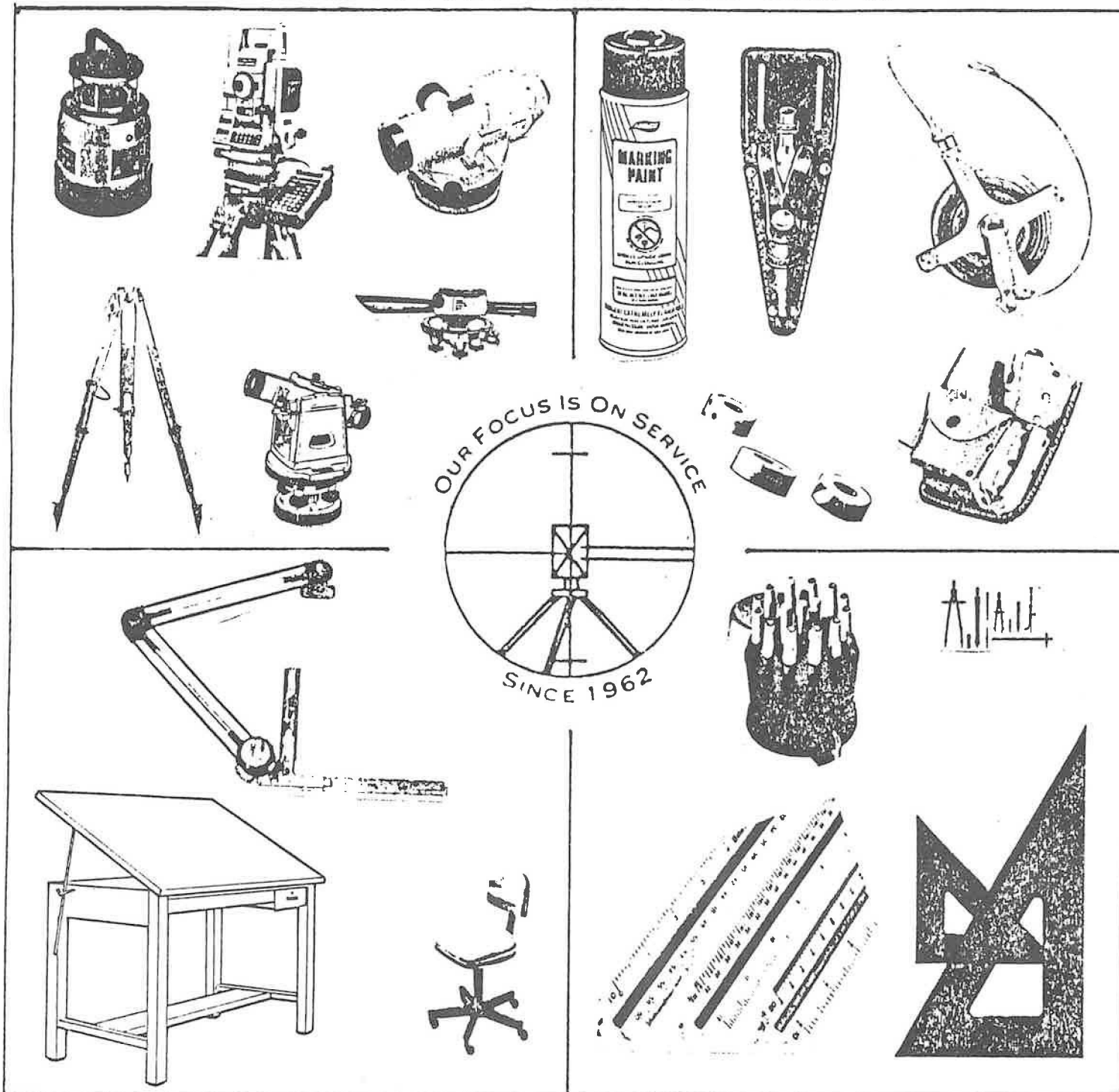
*Each governor since Gates has presented the certificates in his own way. It has been said that one governor even resorted to wearing a full Indian headdress as he read the scrolls. The award is the highest honor which the Governor of Indiana bestows. It is a personal tribute given to those who have rendered a distinguished service to the State or to the Governor. Among those who have received Sagamores of the Wabash have been astronauts, Presidents, ambassadors, artists, musicians, politicians and ordinary citizens who have contributed greatly to our Hoosier heritage.*

*It should be noted that Sagamores have been conferred upon both men and women since the beginning of their existence. There is no record of the total number which have been presented, as each governor has kept his own roll; just as each had reserved the right to select recipients personally.*



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## SURVEYING AND MAPPING IN CHINA AND HONG KONG

"State of the Art"

by David B. H. Best, RLS, Fellow in ACSM/NSPS

*ACSM/NSPS United States Land Surveyors People to People International Delegation trip to the Peoples' Republic of China and the Crown Colony of Hong Kong in October, 1991.*

Surveying and mapping in the People's Republic of China and in the Crown Colony of Hong Kong is "State of the Art". This is the conclusion reached by the 13-member United States Land Surveyors People to People International delegation during its three weeks' trip to China and Hong Kong last October.

This was the third People to People trip for this delegation which included six members of ACSM/NSPS, their spouses and friends. The delegation traveled to Egypt and Greece in 1989 and to the Soviet Union and Finland in 1990. The trips provide an opportunity to share directly with surveying and mapping counterparts.

During the trip to China and Hong Kong counterpart meetings were held in Beijing, Xian, Wuhan, Shanghai, and Hong Kong where we were warmly greeted by those directly involved in surveying and mapping or in the education of surveyors, geodesists, and cartographers. We dealt directly with the leaders of the governmental agencies which control surveying and mapping activities in China and Hong Kong.

In Beijing we held our first counterpart meeting with leaders of the National Bureau of Surveying and Mapping (NBSM) the Chinese agency which directs all surveying and mapping activities in China. The NBSM was founded in 1956 and has the following agencies and institutes under its jurisdiction: bureaus or departments of surveying and mapping in all the provinces (except Taiwan), autonomous regions, and municipalities directly under the central government, the China Cartographic Publishing House, the Publishing House of Surveying and Mapping, the Research Institute of Surveying Mapping, and the National Information Centre of Surveying and Mapping, 28,000 people staff these agencies and institutes. We viewed a 30 minute video which showed a brief history of the NBSM and its current activity. A copy of the video was presented to the author. Surveying and mapping in China is modern in every respect. EDMs, GPS units, computers, plotters - all the latest surveying equipment - are in use in China today. Since 1956 Chinese surveyors have mapped all of China. Horizontal and vertical control networks cover all of China, a monumental accomplishment consid-

ering 75% of China's terrain is mountainous. The first order national leveling network consist of 100 loops and has a total length of more than 93,000 kilometers. In 1985 a new basic gravimetric network, the China Gravimetric Network 1985, was established. Its mean error is less than plus or minus 8 milligal after adjustment.

While in Beijing we also visited with counterparts in the China Cartographic Publishing House (CCPH) and the Research Institute of Surveying and Mapping (RISM). We toured the CCPH with Vice Director Mr. Yan Dao Liang where we saw the reproduction of Chinese maps, world maps, historical maps and school maps. CCPH publishes 90% of the maps available for public use. Maps are being published for use by the estimated three million blind people in China. The author, as delegation leader, was presented with a 48" x 48" silk map in color of an area in Tibet. We all were given small plastic relief maps of China in color.

The RISM employs 250 scientific research workers. To tour the facility we were required to wear slippers. Our host was Mr. Hu Jian Guo, director of the Scientific Research Department. National projects completed by RISM in recent years include: the programming for the simultaneous adjustment of the national astrogeodetic network, the precision height measurement of Mount Qomolangma, the highest mountain in the world, and the study on the standardization of Chinese place names and the romanization of the minority nationality place names. We observed the Vax 11/780 main computer used for GIS and the MX1502 Doppler receiver and data processing software. RISM is involved in international academic exchange programs with the United States and more than 20 other countries. Its departments include those of Geodesy and Engineering Surveying, Photogrammetry and Remote Sensing, Instruments of Surveying and Mapping, Cartography, GIS, National Remote Sensing Center, Geographic Names, and Information on Surveying and Mapping. Our hosts at RISM were Professors Chu Liang Cai, Deputy Director of the Research Institute of Surveying and Mapping, Zhang Qing Pu, Director of the Cartographic Department, and Hu Jian Guo, Director of the Scientific Research Department.

Our next counterpart stop was the Shaanxi Provincial Bureau of Surveying and Mapping (SPBSM) in Xian, the site of the

famous archeological discovery, the terra cotta warriors of the Qing Dynasty. Mr. Liang Hong Bai, Director of the Bureau, explained its scope and operation. SPBSM, staffed by more than 2600 people including 83 senior engineers, directed the surveying and mapping project which established the boundaries between China and Pakistan, China and Nepal, and China and Mongolia. It also sent the first Chinese science observation team to the Antarctic. As we had in our previous meetings with our Chinese counterparts we sensed the SPBSM technicians, surveyors, and engineers were people greatly dedicated to their work. Everyone associated with NBSM understands the need to produce by cooperative effort a land information system which will help create a better life for the people of China who at last estimate numbered 1.25 billion or one-quarter of the world's population.

In Wuhan, the fifth largest city in China, we crossed the mighty Yangtze River on our way to Wuhan Technical University of Surveying and Mapping (WTUSM). Professor Zhang Zuxun, Vice President, explained that WTUSM is the leading university in China for advanced degrees in surveying and mapping. Established in 1956 it now has nine departments and a faculty of 600 including 200 full and associate professors some of whom are internationally recognized. WTUSM operates cooperative programs with the University of Washington and the University of North Dakota. The student body of 2000 impressed us as a dedicated lot, all of whom were required to pass a national examination to gain admittance. We were told that Wuhan summers were hot and humid with temperatures often reaching 100 degrees. We noted the complete absence of central air conditioning in the university buildings.

The Shanghai Institute of Surveying and Mapping (SISM) was our final stop for counterpart meetings in China. Shanghai with a population of 13 million is the largest city in China. A separate institute was needed to meet the demands of the city. SISM is also affiliated with NBSM. It provides surveying and mapping services for city improvement projects and is currently generating a land information system for Shanghai. Vice Directors and senior engineers Zhu Miaozen and Wang Guo Sheng described the operation of the 500 member staff. The survey parties were busy in the field when we were there. We observed technicians operating digital plotters and LIS programs on computers.

From Shanghai we flew to Hong Kong where we held our last counterpart meetings with members of the Survey and Mapping Office

of the Buildings and Lands Department (SMOBLD) and the Hong Kong Polytechnic Institute of Surveyors (HKPIS). Our SMOBLD host was Mr. Gordon Andreassend, Principal Government Land Surveyor in Hong Kong. We attended a briefing in the headquarters building of SMOBLD where we introduced ourselves and described our roles as land surveyors in the United States. According to Mr. Ian J. Ayson, senior land, engineering and hydrographic surveyor, SMOBLD has no formal mission statement other than "...to maintain a sound, up to date survey, mapping, and LIS for the territory." The Hong Kong cadastre is based on recognized boundaries. Mr. Ayson indicated that sometimes it was a struggle to determine where they are. The Hong Kong government adopted the metric system in 1974. SMOBLD produces all maps for Hong Kong including a countryside series which depicts walking and nature trails.

A proposal to adopt a LIS was conceived in the early 1970's. However, not until 1989 was a contract awarded to implement the system which should be completed in 1993. SMOBLD operates a technical training school for all of the skilled positions in the various departments. At the conclusion of the morning's briefing we boarded our bus for a drive to the exclusive Hong Kong Cricket Club to attend a luncheon in our honor. Also in attendance were all the land surveyors in Hong Kong, about 100 of them including two lady surveyors. It was a festive time. The author was the luncheon speaker.

Our final counterpart visit was with Frank Hobbs, a senior lecturer in the Center for Land and Engineering Surveying at the Hong Kong Institute of Surveying. The Center is the only unit in Hong Kong which provides a program for education and training in land surveying. The Center recently started an LIS course leading to a MS degree. It also offers a BS degree in surveying and geoinformatics. The latter is a coined word which reflects an increased emphasis on a computer-oriented education and a decreased emphasis on time devoted to field work with surveying instruments.

We returned from China and Hong Kong with warm feelings for our gracious counterpart hosts. Chinese culture uninterrupted for 5000 years continues unabated. However, Western culture has invaded China which means China will never be the same. We hope to return for another visit with our Chinese counterparts to observe in greater detail their state of the art methods of surveying.



The U.S. Land Surveyors delegation poses for a photo during a tour of the Hong Kong Institute of Surveying (HKIS). Left to right, front row are: Diana Bopp, Hong Kong guide, Robert McClary (CA), David Best (IN), Wong Thein-Nyen, chairman of HKIS Land Survey Division;; second row: Nelson Prall (IN), Joe Shaw (PA), Sandra Wilcox (MI), Estelle Raimondi (IL), Joan Peterson (OR); third row: Jerry Wilcox (MI), Beverly Scheibner (OR), Mary Sue Best (IN), and Nicholas Raimondi (IL).



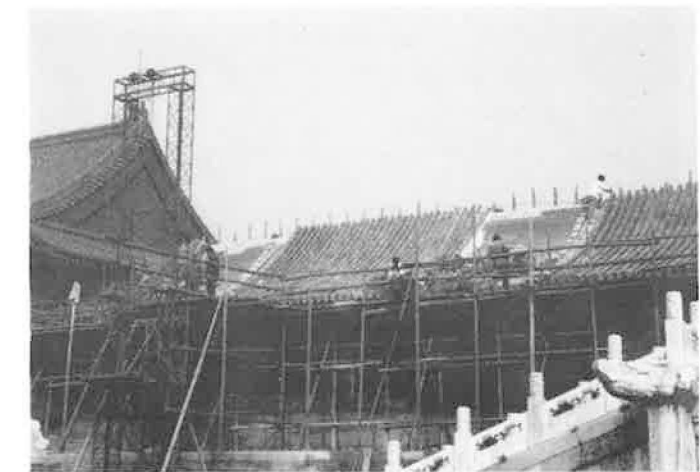
Delegation leader David Best poses with senior engineers and directors of the Shanghai Municipal Institute of Surveying and Mapping.



A backside view of the U.S. Land Surveyors delegates as they walk along a busy downtown street in Wuhan, China.



Nelson Prall, L.S. from Bedford, Indiana and the "youngest" member of the delegation at age 84, climbs atop a planter in a square in Shanghai's Old Town area to get a better picture of the milling crowd.



Chinese workers repair a tile roof on one of the buildings in the Forbidden City.

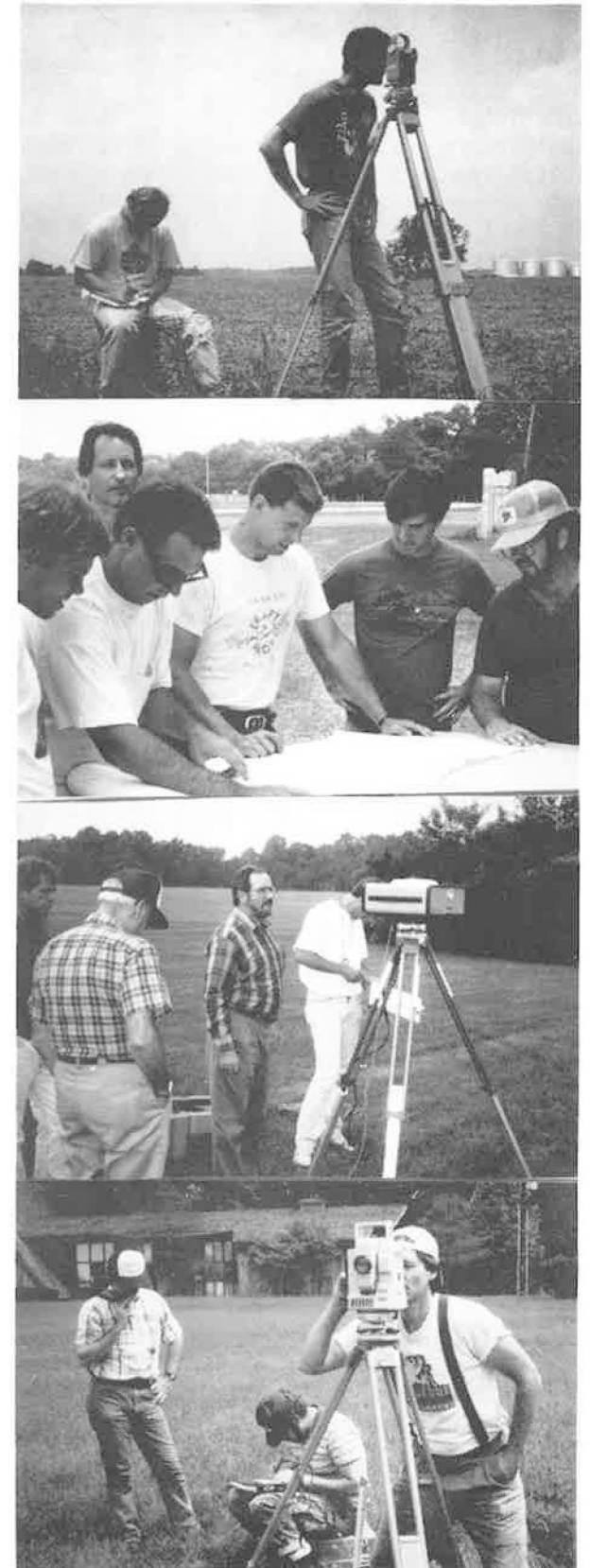
## 19th ANNUAL PURDUE STUDENT SENIOR RECOGNITION DINNER (1991)

The 19th Annual Purdue Student Chapter Spring Senior Recognition Dinner was held at the Morris Bryant Smorgasbord on Saturday, April 6, 1991. The pictures tell the story (left to right by rows). The outgoing officers are Randell Gann (Reelsville), secretary; Greg Eberle (Lafayette), chairman; Scott Zeigler (Albion), vice-chairman; and Eric White (Carmel), treasurer. The invited speaker was Richard Lomax (Charlotte, MI) ACSM Area 5 Director. Dale Grimes (Lafayette), ISPLS Scholarship Co-Chairman, presented the ISPLS John McEntyre Endowment Scholarship Award (\$500 each) to Ryan Wisehart (Stilesville) and Matt Quillen (Franklin). Prof. Curtis presented Randell Gann with the "Outstanding Graduating Senior Award". Curtis presented J.R. Wheatley (Bedford) the Jud and Betty Rouch Land Surveying Scholarship of \$100. Scott Zeigler received a special award in appreciation of his outstanding service as program chairman. Incoming officers for 1991-92 are Carol Marcotte (Lawrenceburg), treasurer; Ryan Wisehart, secretary; J.R. Wheatley, vice-chairman; and Matt Quillen, chairman.



## PURDUE SUMMER SURVEYING FIELD PROJECT (1991) INVOLVES ROSS HILLS PARK

The 1991 four-week Summer Surveying Field Project course was conducted from the main campus in West Lafayette and involved surveys on the Ross Hill Park property on the Wabash River about ten miles southwest of the campus. The Tippecanoe County Parks Department, the County Surveyors Office, and the Purdue Research Foundation were very cooperative. The five land surveying seniors were involved in a successful boundary retracement with several monuments found. All primary and secondary traverses were tied to state plane coordinates with the help of Richard Beaman of MSE Corporation and their four GPS receivers. Gary Kent of Schneider Engineering explained the new Indiana survey standards. Ken Anderson of the U.S. Forest Service discussed their field methods in retracing and marking boundary lines. The Tippecanoe County corner perpetuation crew with Dale Grimes dug to recover an important 1933 GLO quarter corner. Most survey stations were permanently monumented for future users. The staff consisted of Ken Curtis and Gerry Mahun. Students were, left to right, Matt Quillen, Franklin; Ryan Wisehart, Stilesville; J.R. Wheatley, Bedford; Greg Eberle, Lafayette; and Eric White, Carmel.



## THREE VISITING FACULTY ENHANCE TEACHING PROGRAM

Patrick Cunningham (center), a 1976 graduate of Purdue's land surveying program, is owner and president of Vester and Associates, a surveying firm in Lafayette. He brings considerable practical experience to his two courses, Property Surveys and Descriptions; and Legal Aspects of Surveying. He is past president of the Indiana Society of Professional Land Surveyors and was recently appointed by Governor Bayh to serve on the newly created State Board of Registration for Land Surveyors.

Ernst Knickmeyer (left), holds a Diplom-Ingenieur from the Technical University of Berlin and a Doktor-Ingenieur from Stuttgart University, Germany, with major emphasis in geodesy. He recently spent two years as a research associate at the University of Calgary, Canada, specializing in inertial systems and two years with Pulsearch Consolidated Technology Ltd also in Calgary. He is a licensed surveyor and assessor in Germany. He is teaching the undergraduate course in Photogrammetry and Airphoto Interpretation and a graduate course in geodesy.

Steven McCrary (right), holds the BSCE and MSE from the University of Texas at Arlington and worked for several years for an engineering consulting firm. He completed his doctoral dissertation on the use of facilities management systems to improve infrastructure management in small communities. He was awarded the Ph.D. in 1991 from the University of Missouri-Rolla. He has been teaching the Fundamentals of Surveying course and Subdivision Planning and Design.

In addition, Bryn Fosburgh, a physical scientist with the U.S. Army Engineer Topographic Laboratories, Fort Belvoir, VA was on campus for the Fall Semester 1991 to begin work on a Ph.D. degree. Besides taking some courses, he brought with him a couple of GPS receivers and used them effectively in teaching a graduate course in geodesy and sharing a portion of the geodetic control surveying course with a lengthy discussion involving GPS. Students got an in depth review of G.P.S. techniques and theory.

Also Gerald Mahun, who was a visiting instructor during the 1990-91 school year, has accepted a position as an assistant professor at Penn State University (Wilkes-Barre campus) in their two-year associate degree program in surveying.



## DR. DRNEVICH BECOMES NEW HEAD OF SCHOOL OF CIVIL ENGINEERING

On July 1, 1991, Dr. Vincent P. Drnevich succeeded Harold Michael as the head of the School of Civil Engineering at Purdue University (West Lafayette campus). Dr. Drnevich earned his BSCE and MSCE from the University of Notre Dame and his Ph.D. from the University of Michigan. Since receiving his Ph.D. he has been a member of the civil engineering faculty at the University of Kentucky in Lexington. He served as chairman of Civil Engineering Department from 1980 to 1984 and acting dean of engineering from July 1989 to June 1990. Vince's engineering specialty is geotechnical engineering. The integration of his activities into his new position as head of a diversified faculty of some sixty teachers and researchers has been exceptional. With respect to surveying, he has met with students, faculty, and representatives of ISPLS and all indications are that he is committed to the continuation and enhancement of the land surveying undergraduate program and the graduate programs in geodesy and photogrammetry. To this end, several persons have been interviewed for openings on the faculty and some money has been obtained to purchase much-needed modern equipment. It appears that Purdue's program will survive and actually flourish under his leadership. Welcome aboard!



### CHANGES IN LAND SURVEYING CURRICULUM

As the result of a rather recent accreditation visit by Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET), several changes are being made in Purdue's land surveying curriculum. Although there was the possibility to be accredited under the Engineering-Related Accreditation Commission (RAC), as are about half of the 4-year surveying programs in the U.S., the faculty and administration chose to remain under the guidelines of EAC. These engineering criteria requirements change occasionally and therefore Purdue must conform if they want to be accredited.

Therefore, beginning with students starting their education in the Fall 1992, the following changes will occur: 1) The title of the degree will be Bachelor of Science in Land Surveying Engineering (BSLSE) instead of Bachelor of Science in Land Surveying (BSLS). The word "engineering" must be in title of degree; 2) Two required chemistry courses will replace the science elective (geology, astronomy, botany/dendrology, or chemistry) in the freshman year; 3) An additional mathematics course in calculus/differential equations will be required to replace one elective; 4) A course in computer-aided drafting and design (CAD) will replace descriptive geometry which is no longer offered; 5) Since at least one course in engineering science must be taught outside the major discipline area, a course in thermodynamics taught by mechanical engineering will be required; 6) In order not to increase the total credits for graduation (133 credits), two elective courses (6 cr.) will be reduced to one elective course (3 cr.) that must come from an approved list of engineering or science courses.



## ACSM/ASPRS FALL CONVENTION

October 27-30, 1991, Atlanta, Georgia

by Gary R. Kent, RLS, ACSM Director, Indianapolis, Indiana

The Atlanta meeting was widely anticipated as being the point at which the ACSM-NSPS, Inc. feud would come to a head. In fact, a great majority of the substantive issues brought to the ACSM board by NSPS/NSPS, Inc. were addressed favorably from the NSPS/NSPS, Inc. point of view.

Any person truly interested in the continued existence of a viable ACSM which more adequately addresses the issues of NSPS/NSPS, Inc. had to have come away with a sense of accomplishment and renewed optimism.

Despite having to deal with a number of irrational ultimatums and impossible deadlines, the ACSM Board approved numerous changes to the Constitution and ByLaws. Those changes, described below, will be on the next ACSM ballot for membership consideration.

Additionally, the ACSM Board agreed to the four items contained in the so-called "Tapley Resolution" approved by the NSPS Board on July 20, 1991. By doing so, among other things, the ACSM Board agreed to recognize NSPS, Inc. as the successor Member Organization to NSPS and to transfer all NSPS funds to NSPS, Inc. effective January 1, 1992.

Among the changes to the Constitution and ByLaws, changes being sent onto the membership are:

- 1) A formalizing of the rotation of the ACSM Vice President / President-Elect among the member organizations (MO's).
- 2) ACSM Directors to be elected as representatives from the MO's will be nominated by the respective MO's Nominations Committees and voted on only by the members of the respective MO's. The ACSM Nominations Committee will be eliminated.
- 3) The membership of ACSM may force an issue to be brought before the Board of Directors by a petition signed by at least 5% of the voting membership in good standing.
- 4) ACSM and each MO shall operate within a balanced budget.
- 5) An MO may terminate membership in ACSM by an affirmative 2/3 vote of those voting by a mail ballot. Should such a vote fail, the MO may not repeat such an initiative for 3 years.

Financially, ACSM will end 1991 with a budget surplus for the first time in a number of years. The approved 1992 budget also shows a

bottom line in the black. This is hopefully the beginning of a turnaround in the ACSM financial situation.

In addition to dealing with the hard issues concerning the very existence and future of the organization, a number of other substantive concerns were addressed.

Responsibility for the Certified Survey Technician Program was transferred to NSPS where it rightfully belongs.

Approval was given for the ACSM-ALTA joint sponsoring of seminars to address the issues surrounding the ALTA-ACSM Land Title Survey requirements.

In the area of membership and member benefits, a number of initiatives were addressed.

The President of ACSM was instructed to appoint an Ad Hoc committee to study the ramifications of a new ACSM member organization comprised of GIS/LIS-related persons.

At the suggestion of NSPS, a motion was approved which allows the granting of relief from membership dues for the succeeding year if a member sponsors a minimum of three new members to ACSM. The new members must be of an equal or higher class of membership.

At the request of NSPS, ACSM will study the possibility of obtaining access to a health insurance program for individual members.

ACSM authorized the publication of a draft Creed and Canons (as presented by the NSPS Ethics committee) for comments from the ACSM membership.

Conventions have become an increasingly important facet of ACSM both financially and as a vehicle for society business and professional communications. As such, several convention-related issues were addressed.

An agreement with ASPRS as to the administration of Joint ACSM-ASPRS Convention was approved. Among the more important issues addressed by the agreement are a clarification of the roles of the various groups involved in the running of conventions and provisions for better management of convention finances.

The ACSM Board approved a number of future Joint Conventions as follows:

Spring 1992	Albuquerque, New Mexico
Summer 1992	Washington, D.C. (in conjunction with the ISPRS meeting)
Spring 1993	New Orleans, Louisiana
Spring 1994	Reno, Nevada
Spring 1995	San Antonio, Texas

(Continued Page 19)

## MEET QBS INDIANA COALITION

### Qualifications-Based Selection

The fall issue of the Hoosier Surveyor reported that Jerry Ginthner had been selected as state facilitator for the Indiana QBS program. This article will expand on what QBS is and how it works.

QBS is a process for selecting design professionals on their skill, experience, and background as opposed to bidding as many public owners now require.

QBS is a very flexible method that permits public owners to tailor his selection process to meet their specific needs. The program offers an owner's checklist and step-by-step procedure for the development of selection materials based on the requirements of a specific project.

How does QBS work? The recommended method should include the following steps:

- 1) The owner determines the general scope of work.
- 2) The projected time frame is established.
- 3) A list of professional firms is compiled.
- 4) Letters of qualifications are registered. Letter of qualifications are received & evaluated.
- 5) A short list of firms to be interviewed is established.
- 6) A tour or tours of the site and/or facility are arranged.
- 7) Interviews are conducted and the firms ranked for selection.
- 8) A contract is negotiated with the selected firm. If a contract cannot be negotiated then the owners enter negotiations with the second preferred firm.

The QBS facilitator works one on one with municipal officials or other groups to develop the process and for the selection of a qualified firm. The service of the independent QBS facilitator is not intended in anyway to influence the selection of any specific design firm.

The QBS Facilitator will:

- \* Meet with the involved boards, committees, staff, individuals or groups to provide information on the rationale of the QBS process.
- \* Develop materials for the owner based on the specific needs & requirements. Provide ongoing guidance during the selection process by telephone or mail.
- \* Supply directories of design firms.

On the other hand, the QBS Facilitator...

- \* Will NOT recommend any individual or firms.
- \* Will NOT provide evaluations or critiques on any individuals or firms.
- \* Will NOT dictate the process to be used in the selection of a design professional.
- \* Will NOT participate in the interviewing process.
- \* Will NOT participate in the negotiations of the contract.

There is no charge to the owner for QBS which is offered as a public service and financially supported by the I.S.P.L.S. and five other professional associations and the contributions from individual design firms.

How can you promote QBS?

According to Jerry Ginthner, "Design professionals should better inform their public owner clients of the pitfalls of using price as a factor in ranking design professionals. An education program must come from both individual firms and their professional societies."

\* \* \* \* \*

ACSM  
(Continued from Page 18)

Spring 1996	Baltimore, Maryland
Spring 1997	Seattle, Washington
Spring 1998	Baltimore, Maryland

The Fall meetings have since 1990, been folded in with the GIS/LIS meeting. The Atlanta meeting showed record registration (again) with a substantial increase over 1990 attendance. The schedule for the GIS/LIS meetings that are known or anticipated at this time are:

Fall 1992	San Jose, California
Fall 1993	Minneapolis, Minnesota
Fall 1994	Phoenix, Arizona
Fall 1995	Nashville, Tennessee
Fall 1996	Denver, Colorado

The Atlanta convention represents a major turning point for ACSM and its Member Organizations. Despite a few minor setbacks and despite the admonishments of persons whose real objectives might be questioned, ACSM is on the road of renewal.



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INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS, INC.  
SEMINAR

**"LEGAL RESPONSIBILITIES OF THE LAND SURVEYOR"**

APRIL 24, 1992, AT VALPARAISO UNIVERSITY  
VALPARAISO, INDIANA

\*\*\*\*\*

The Northwest Chapter of ISPLS will sponsor a day-long seminar covering the Legal Responsibilities of the Land Surveyor. Ron Hansell, ISPLS's attorney, will be the keynote speaker. Other speakers will include additional attorney(s), a title company official, an E & O insurance representative, and a member of the Board of Registration for Land Surveyors. Topics to be presented include:

- \*Surveyor's Liability\*
- \*Professional Liability\*
- \*Recent Cases and Statutes\*
- \*Forestry and Tree Preservation Ordinances\*
- \*Certifications and Limitation of Certification Warranties\*
- \*Cemeteries\*
- \*Easements and Unwritten Rights\*
- \*Contracts\*

\*\*\*\*\* ATTENDEES WILL RECEIVE CREDIT FOR  
5 PROFESSIONAL DEVELOPMENT HOURS (PDH) \*\*\*\*\*

For additional information, contact any of the following:

- Don Bengal (219) 465-3560
- Tony Gregory (219) 989-2577
- Rich Hudson (219) 462-1158
- Ron Hansell (317) 253-9624

December 3, 1991

Indiana Society of Professional Land Surveyors  
55 Monument Circle, Suite 1222  
Indianapolis, IN 46204

Dear Members:

On behalf of the Surveying Technology Club at Vincennes University, we would like to thank two members of the Society, Wes Day and Gary Kent on a recent presentation of current surveying standards as approved August 1991. They presided over Knox County Realtors, Real Estate Loan Officers, Abstractors, Land Surveyors, and Surveying Majors at Vincennes University on November 19, 1991.

The sacrifice of coming from Indianapolis for a night presentation was greatly appreciated by all who attended. Their devotion to the profession of surveying make these two individuals valuable society members.

Schneider Engineering should be complimented on the quality and professional nature of these individuals.

Sincerely,

Surveying Tech Club  
Member ISPLS  
President *Scott Hulse*  
Vice President *David K. Lynch*  
Secretary *Elizabeth*  
Treasurer *Cory A. Claugton*

# DON'T CATCH A COMPUTER BUG

## What Can Be Done?

On the dark side of computing, there are hackers, worms, logic bombs, and Trojan horses.

Hackers are human snakes who use their computers to break into other computer systems to filch credit card numbers and other data. Worms are pieces of computer code that do dirty work, such as installing an illicit account in a bank's system, then transferring funds into it. Logic bombs are computer programs meant to go berserk at preset times; they can pop up and say, "Happy Birthday, nerd!," or destroy data in an instant. Trojan horses are malignant bits of software disguised as something interesting.

And there are VIRUSES! Like their biological namesakes, these strings of misbegotten computer code are difficult to detect, can replicate themselves without the user's knowledge, and can quickly infect an entire group.

Typically, the virus is designed to piggyback with a useful program and to begin its malignant growth when that program is first called up for use. While proliferating, the virus carries out the devious design of its creator, whether erasing data on a disk, writing incorrect information into a document, or destroying computer components. It leaves in its wake inconvenience or incapacity.

Viruses are most commonly spread when people transfer programs or data from one system to another via a floppy disk or modem line, over local and wide area networks, and through public and private on-line services.

As the number of viruses has grown to epidemic proportions (over 400 have been identified to date), software companies have developed detection products to diagnose, track, and eradicate viruses; and repair damaged files. Ridding the system of a virus can be costly, and can mean losing data and productivity.

Although some of these procedures represent breakthroughs in dealing with virus infection, none is a substitute for safe computing, the first line of defense. To practice safe computing:

- Use only brand-name software purchased in a sealed package from the manufacturer or a reputable dealer.
- Treat public domain and shareware software with caution. Test the software with a virus detection program before using it.
- Always maintain up-to-date backups, copying applications and data on separate disks. This last precaution keeps data files, which do not usually carry viruses, away from applications programs, which can carry viruses.

The key to protection is awareness and vigilance, says Ray W. Elliott, CPA, of Coopers and Lybrand. It takes only one lapse to defeat the whole protection system.

## VIRUS WARNING SIGNS

Frequent System Crashes  
Applications Behaving Erratically  
Files Mysteriously Increasing in Size  
Slow Network & Printer Operations  
Difficulty Accessing Data Files

## WAYS TO AVOID DAMAGE

Back Up Data Frequently  
Avoid Software from Questionable Sources  
Isolate Software the First Time It's Run  
Regularly Check Systems & All Incoming Files  
& Programs for Virus Infection

Courtesy of SYMANTEC Magazine, Symantec Corporation, Cupertino, California. Hugh R. Bethell, Editor and Publisher.

## SURVEYORS HISTORICAL SOCIETY NEWS

The Indiana Affiliate of SHS held its annual meeting in conjunction with the Indiana Society of Professional Land Surveyors, Inc. convention recently in Columbus, Indiana. Columbus had been selected for the 1992 convention to commemorate the 500th anniversary of Christopher Columbus' voyage. The city of Columbus is in Bartholomew county which is named for General Joseph Bartholomew, who fought at the Battle of Tippecanoe. The county was originally surveyed into mile squares according to Tiffin's instructions using the Second Principal Meridian and Baseline; and more recently, it claimed to be the first county in Indiana to have remonumented all the section corners.

At the Indiana SHS affiliate's business meeting Roger Woodfill was elected Chapter President and Scott Zeigler was elected Chapter Secretary for the 1992-1993 business years. This affiliate's by-laws call for officers to be elected by the membership in even years, and the directors are elected in odd numbered years.

Along with historical survey instruments the SHS booth featured several framed older transportation maps of Indiana. Several visitors had interesting comments on how the road system had changed since the 1920's and 1930's. Chris Marbach donated his framed SHS photograph of a wye level as restored by David St. John to the ISPLS scholarship raffle raising \$271.

Hal Ashton and Brad Rayl reported that they are preparing a program on the "History of Surveying in Indiana" for the Midwest Open-Air Co-ordinative Council meeting, and asked if the affiliate of SHS would like to participate. The board of directors held a short meeting after the membership meeting and voted to aid Ashton and Rayl in this endeavor.



## SURVEYING AUTOMATION '92 COMING TO DALLAS!

CANTON, MICHIGAN - P.O.B. Publishing Company, publisher of P.O.B. Magazine will sponsor Surveying Automation '92, P.O.B.'s annual technology conference on June 9, 10, 11, 1992 in Dallas, Texas. Surveying Automation '92 is held in conjunction with A/E/C SYSTEMS '92 computer exhibition.

Surveying Automation '92 is a three-day conference designed to provide surveyors and civil engineers with the up-to-date information they need to manage their firm's surveying automation effectively.

Surveying Automation '92 will be held at the Dallas Convention Center in conjunction with A/E/C SYSTEMS '92 - the world's largest computer applications show for design professionals. More than 25,000 design and construction professionals are expected to attend the 150+ conference sessions and view the 500 vendor/1400 booth exhibit.

## NEW McENTYRE WORKBOOK

Most surveyors are familiar with McEntyre's earlier textbook LAND SURVEY SYSTEMS (1978), hard cover, 537 pp., which details the development of the public land survey systems in the United States tracing their evolution from 1785 through the 1973 BLM Manual. Integrated into the discussion are important boundary survey principles, including the proper procedures for retracement surveys, subdivision of sections, and writing correct metes and bounds descriptions. Also included are chapters covering use of state plane coordinates and proposed future land data systems.

Now, McEntyre has written a new WORKBOOK FOR LAND SURVEY SYSTEMS - Containing Problems - Questions - Answers (1990), spiral bound, 186 pp., which is arranged in topics to accompany and coincide with the textbook listed above. However, it can stand alone as a problem book for students and those preparing for examinations. All 33 problems have full solutions; all 185 questions are answered. It also contains a special supplementary discussion about the center of section and status of surveyors in retracement work.

Both books are required texts for Purdue's three-credit course titled "Land Survey Systems". Books are available for purchase from the publisher, Landmark Enterprises, Box 160502, Ft. Sutter Station, Sacramento, CA 95816.

## CALENDAR

- February 29-March 5, 1992**  
ACSM/ASPRS Annual Convention, Albuquerque, New Mexico
- March 19, 1992**  
ISPLS Workshop (1 Day), Route Surveys, Holiday Inn E., 6990 E. 21st St., Indianapolis, Indiana
- March 20, 1992**  
ISPLS Workshop (1 Day), Route Surveys, Holiday Inn E., 6990 E. 21st St., Indianapolis, Indiana
- March 25, 1992**  
Initial Point Chapter Meeting, 6:30 p.m. Social, 7:00 p.m. Meeting, Sam's Restaurant & Grill (upstairs), New Albany, Indiana
- April 10, 1992**  
ISPLS Workshop, Rule 13, Holiday Inn, 411 W. Spring St., New Albany, Indiana
- April 24, 1992**  
ISPLS Spring Workshop, Co-Sponsor Northwest Chapter ISPLS, "Legal Responsibilities of The Land Surveyors", Valparaiso University
- May 1, 1992**  
ISPLS Workshop, Rule 13, Holiday Inn-Airport, 2501 S. High School Road, Indianapolis, Indiana
- May 27, 1992**  
Initial Point Chapter Meeting
- June 5, 1992**  
ISPLS Workshop, Rule 13, Ramada Inn, 52890 U.S. 33 North, South Bend, Indiana
- June 9-11, 1992**  
Surveying Automation '92, held in conjunction with A/E/C SYSTEMS '92, Dallas, Texas.
- October 2, 1992**  
ISPLS Workshop, McCormick's Creek, (Topic To Be Announced)
- November 6-12, 1992**  
ACSM/GIS/LIS Fall Convention, San Jose, California
- March 17-19, 1993**  
Joint Society Convention (ISPLS, ISPE, ASCE, CEI, IEEE), Adams Mark Hotel, Indianapolis, Indiana
- March 20, 1993**  
ISPLS Workshop, Adams Mark Hotel, Indianapolis, Indiana, (Topic To Be Announced)
- October 1, 1993**  
ISPLS Fall Workshop, Turkey Run State Park, (Topic To Be Announced)

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