

Does the Council focus enough attention on surveying?



Robert C. Krebs, P.E., L.S.
NCEES President

At the Annual Meeting in August and at several subsequent functions, some members have said to me that the Council should increase the focus on and the awareness of the surveying side of our activities. Some comments were directed specifically at our Annual Meeting agenda

and the lack of time spent on surveying issues, while others expressed a concern about the Council's lack of involvement with surveyors at a national level. I think this perception is a genuine concern that needs attention.

I certainly encourage this type of feedback and compliment those members who are willing to be proactive on important issues. Last fall, I responded to some of these issues, and I would like to share with you a little of that discussion. I need to emphasize that some of my comments reflect my own personal views and not necessarily the Council's position, and I will make such distinctions as clear as possible.

In addressing particular surveying concerns, it might be useful to tell you some of my experiences with the surveying profession and the Council. My commitment to the surveying profession is no more and no less than my commitment to the engineering profession; however, more of my initial professional involvement has been with surveyors through my state society, the American Congress on Surveying and Mapping (ACSM), the National Society of Professional Surveyors (NSPS), and the Colonial States. My initial Council involvement was with the Committee on Examinations for Professional Surveyors (EPS), and the land surveying professional activities and knowledge study (PAKS) committees. I've been involved with the Council since the early 1990s, and I have witnessed what I believe is more respect for, acknowledgement, and recognition of

the surveying profession. Other substantive changes occurred before my involvement with the Council, such as the change of the Council's name to include surveying and the requirement to have at least one surveyor on each committee.

That said, I believe I understand the concerns of those who say that not enough of the 2002 Annual Meeting was related to surveying. At one of my first zone meetings, I sat through a very frustrating meeting where a majority of engineers debated whether engineering exams should be offered to Japan and how that should be done. It wasn't until we broke into forums (which in the Northeast Zone is essentially the Colonial States group) that anything about surveying came up. As a newcomer, I had a relatively narrow view of the functions of the Council and the business it needed to address. It took me several years and a renewed involvement with the land surveying exams to more fully understand the various activities of the Council.

Exams are the primary focus of the Council. Each profession, with due respect given to candidate volumes, receives the necessary resources for exam development. However, the remainder of what the Council does is generically known as Member Board services and is vitally important to the operation and performance of our Member Boards—though admittedly not very glamorous. By "not glamorous," I mean that, though the administrative functions of the Council are the nuts and bolts of what NCEES does, they are perhaps not very interesting. Ask any volunteer who has chaired the Committee on Uniform Procedures and Legislative Guidelines (UPLG) about the drudgery of reviewing and suggesting changes to the *Model Law* and the *Model Rules of Professional Conduct*. Ask a chair of the Committee on Examination Policy and Procedures (EPP) about detailing our exam policies, and you will get a clear idea of what I mean by "less glamorous." However, those types of functions are a substantial part of what the Council does in an effort to assist our Member Boards in their duties to protect the public. In my opinion, what we do is

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Council focus attention... (continued from page 1)

less about the methods of surveying or the various new disciplines of engineering and more about developing quality exams and assisting Member Boards in their mission to protect the public.

There were not many surveying-related activities to report at the 2002 Annual Meeting, and I would say, that in the same sense, there were relatively few engineering-related activities to discuss. The point being that our exam policies, *Model Law* changes, continuing professional development rules, exam security, exam administration, finances, Member Board agreements, mobility, and comity, and all the other issues that have consumed much of our time have no boundaries, in general, between engineering and surveying. I realize, though, that it probably feels like there is a lack of surveying-related issues at NCEES meetings.

The Task Force on Model Law for Surveying presented its report at the 2002 Annual Meeting—and its recommendations (to be reviewed by this year's UPLG Committee) are significant to the future of the surveying profession. Efforts to modify the *Model Law* as it applies to surveying have been ongoing since at least 1995. A rather detailed history of that undertaking is available on the Web sites of the ACSM and the American Society for Photogrammetry and Remote Sensing (ASPRS). The changes proposed by the task force at the 2002 Annual Meeting provide the framework (similar to

enabling legislation) for various avenues of practice. How that framework is implemented is a matter of Council policy, especially the exam policies related to modules for land surveying exams. If all the psychometric criteria are met, including a

demonstration of need, and if the Council body so approves, land surveying modules may eventually be developed. The point being, this surveying discussion is currently going on—and NCEES vitally needs input from its membership.

There was time to discuss the report presented by the Task Force on Model Law for Surveying at the 2002 Annual Meeting, and there will be time to discuss this issue at this year's zone meetings and Annual Meeting, when the formal changes are proposed to the *Model Law*. In addition, there is opportunity this year to provide input to the UPLG Committee concerning

changes to the *Model Law* and how all of that might affect or mandate modularization. I will certainly admit that each Member Board and each individual carry much of the burden of carefully reading all the Council reports and monitoring the activities of various committees and subsequently bringing concerns to the table. Much of what happens at the Annual Meeting is action on reports and motions, and this represents the activities of the past year(s). Members should rely on their Zone Vice Presidents and committee liaisons as an avenue of access to committee activities, or better yet, submit their names to the Council for consideration

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There were not many surveying-related activities to report at the 2002 Annual Meeting, and I would say, that in the same sense, there were relatively few engineering-related activities to discuss. The point being that the issues that have consumed much of our time have no boundaries, in general, between engineering and surveying. I realize, though, that it probably feels like there is a lack of surveying-related issues at NCEES meetings.

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to be on a committee where they wish to have more input.

Another issue brought forth by various members regards promotion of surveying. I intend to explore ways to include surveying in our promotional efforts. I personally struggle with the idea of the Council "promoting" ideas and values, and I am much more comfortable with the Council "advancing" the same when they fall within the realm of the NCEES purview. I believe the Council as a whole and its Board of Directors have drawn a reasonably bright line between professional (engineering or surveying) promotion and the advancement of the licensure concept. The differences are subtle but significant to me. The Council vision and mission speak to licensure, and, to a limited extent, I believe the Council should advance the concept and value of licensure.

As is widely known, there exists an industrial exemption for engineers, which by some estimates accounts for the 20% to 80% split of licensed to non-licensed engineers. I believe that this is partially due to the requirement of authorities who regulate the "built environment" and require work products and plans to be signed and sealed by licensed engineers. The ratio of built-environment work versus products-and-industry work is similar (20/80) in my opinion. I would guess that the opposite is true for surveyors, where a large majority of surveyors work in the built environment, and thus licensure is usually required by statute. Where this hypothesis leads me is that the need to advance

licensure for the surveying profession is not as predominant as with engineering. I do agree that there is a stark need to encourage and advance the *profession* of surveying to our qualified youth, to be ambassadors to our schools and colleges, and to find competent recruits to replace some of us gray hairs. It is my opinion that licensure for up-and-coming surveyors is much more apt to follow

without undue advancement, especially when compared to the engineering community. I feel strongly that the Council focus should be on licensure for both professions, and that state societies, professional organizations, and individuals (including me) need to step up to the plate to advance the professions.

I hope I have addressed some of the immediate concerns that various members have expressed to me regarding the seeming lack of interest

in surveying at NCEES meetings and in its promotional activities. I thank you for taking the time and effort to convey your thoughts, and I look forward to some positive changes this year and in the years to come. We have already had some renewed contact with national surveying groups and plan to meet with them this spring to explore ways to improve communications and work together on common issues. As you read what I've written, do not hesitate to contribute your ideas by writing a letter to the editor or by contacting me or any member of the Board of Directors with your concerns. It is only through the active participation of all our members that NCEES can continue to face the challenges of the future for engineering and surveying.

Robert C. Krebs, PE., L.S.
NCEES President

There was time to discuss the report presented by the Task Force on Model Law for Surveying at the 2002 Annual Meeting, and there will be time to discuss this issue at this year's zone meetings and Annual Meeting, when the formal changes are proposed to the Model Law.

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Headquarters
UPDATE

Special edition of *Licensure Exchange* will summarize BPA



Betsy Browne
NCEES Executive Director

The race to the Annual Meeting is nearly upon us. As you read this, committees are preparing their responses to charges assigned by President Krebs. A few committee chairs will make initial presentations at the Board Presidents Assembly, February 13–15.

The BPA is always an important time for discussion, debate, and networking, but this year it will be especially informative. Board Presidents and Member Board Administrators will have the opportunity to hear background information as well as recent developments regarding exam security. They will hear concerns about the future of engineering education, the validity of the accreditation process, and possible roles for the Council. So many topics will be covered, we recognize the need for a special edition of *Licensure Exchange*. It will summarize the meeting for those unable to attend. Look for this special edition in March.

The long-awaited NCEES speaker's kit will debut at the Board Presidents Assembly. It is not uncommon for board members to request information from Council headquarters for use when making a presentation about licensure. The speaker's kit is designed to meet this need. Having accurate information at a speaker's fingertips is essential, and user-friendly, easily accessible materials may encourage many board members

to speak about licensure who otherwise would not. The kit is a multimedia package covering all modes of learning and presentation. BPA attendees will have the opportunity to view the kit's eye-catching licensure pamphlet, video, and PowerPoint presentation, and hear the script from which prospective speakers may spring-board. It is truly a kit that any speaker would be glad to use—in part or in its entirety—to reach out to university-level engineering students about the value of licensure. Needless to say, we are excited about its potential. What the Council will need in coming months are volunteers willing to speak at university campuses near their homes. If you are interested in speaking, e-mail your contact information to outreach@ncees.org, and we will provide you with more information.

Following on the heels of the BPA are the spring zone meetings. The first is the Southern Zone meeting, March 20–24 in Charleston. The South Carolina Board is busy with preparations and promises a gala affair to accompany the busy agenda. The Central and Northeast Zones will meet in April, and the Western Zone will meet in May. I look forward to seeing you and working with you to support licensure for engineers and surveyors.

Betsy Browne
NCEES Executive Director

Upcoming
EVENTS

DATE	EVENT	LOCATION
February 13–15	Board Presidents Assembly	Girdwood, AK
February 27–March 1	Board of Directors Meeting	Naples, FL
March 20–23	Southern Zone Meeting	Charleston, SC
April 3–5	Central & Northeast Zone Meetings	Orlando, FL
April 11	PE and PLS Exam Administration	
April 12	FE and FLS Exam Administration	
May 15–17	Western Zone Meeting	Red Lodge, MT

Council releases October 2002 pass rates

PE Pass Rate (%) Comparison October 2002

Exam	1st Time Takers	Repeat Takers
Chemical	66	21
Civil	58	31
Electrical & Computer	64	37
Environmental	68	27
Mechanical	65	36
Structural I	65	27
Agricultural	75	18
Control Systems	82	47
Fire Protection	52	33
Industrial	57	28
Manufacturing	TBA*	
Metallurgical	54	30
Mining/Mineral	63	42
Nuclear	93	0
Petroleum	66	39

FE Pass Rate (%) Comparison October 2002

Exam Module	EAC/ABET 1st Time Takers	EAC/ABET Repeat Takers
Chemical	88	49
Civil	81	36
Electrical	80	36
Industrial	70	33
Mechanical	85	26
General	76	27

LS Pass Rate (%) Comparison October 2002

Exam	1st Time Takers	Repeat Takers
PLS	70	33
FLS	53	23

Send letters to *Licensure Exchange Editor*: NCEES, P.O. Box 1686, Clemson, SC 29633 or e-mail to lwiliam@ncees.org.

Please include your name and state of residence on the letter. Letters may be edited for clarity, brevity, and readability.

*Manufacturing pass rates will be released in February 2003.

Structural II

A total of 325 candidates took some portion of the Structural II examination. Of those who took only the morning session, 47% passed. Of those who took only the afternoon session, 39% passed. Of those taking both the morning and afternoon portions, 14% passed.

NCEES OPERATING SUMMARY (2002-2003) For the Period December 31, 2002

	Actuals Year-to-date	Budget Year-to-date	Budget Variance	2002-2003 Total Budget
INCOME				
Member Boards	\$ 58,464	\$ 118,202	-50.54%	\$ 737,825
Examinations	70,015	127,434	-45.06%	5,313,735
Study Materials	117,234	165,351	-29.10%	1,036,200
Records	249,795	283,626	-11.93%	1,134,500
Exam Admin. Services	<u>84,780</u>	<u>25,000</u>	<u>239.12%</u>	<u>707,000</u>
Total Income	\$ 580,288	\$ 719,613	-19.36%	\$ 8,929,260
EXPENSES				
Member Boards Services	\$ 332,953	\$ 436,842	-23.78%	\$ 2,145,671
Examinations	1,010,451	1,262,951	-19.99%	4,860,936
Study Materials	113,378	225,957	-49.82%	815,051
Records	113,671	151,803	-25.12%	569,624
Exam Admin. Services	<u>264,304</u>	<u>205,619</u>	<u>28.54%</u>	<u>647,098</u>
Total Expense	\$ 1,834,757	\$ 2,283,172	-19.64%	\$ 9,038,380
NET INCOME (DEFICIT)	\$(1,254,469)	\$(1,563,599)	-19.77%	\$(109,120)

Members rank exam security as a top issue



Andrew Liston, P.E., P.L.S.
Chair, Advisory Committee
on Council Activities

The results of the survey show that while the issues named as most important to the Council remain constant, the ranking of importance has changed, reflecting the consensus of the Member Boards and providing more direction for the strategic plan.

The goal of the Advisory Committee on Council Activities (ACCA) has been to involve all members of Member Boards in the strategic planning process. It has attempted to gather information on what members consider the most important issues facing NCEES over the next five years and has been working, as well, to rank those issues in order of importance. Attendees of the February 2002 Board Presidents Assembly brainstormed, named, and discussed such issues. The issues were later defined in workshops at the 2002 Annual Meeting. A "blind" survey distributed to the Board of Directors further confirmed that the issues selected at the previous meetings are on target. In an effort to give all members of the Council an opportunity to participate in the strategic planning process, including those who were not able to attend the Board Presidents Assembly and the Annual Meeting, the ACCA decided that a written survey should be distributed to all Member Boards in September 2002. The results of the survey show that while the issues named as most important to the Council remain constant, the ranking of importance has changed, reflecting the consensus of the Member Boards and providing more direction for the strategic plan.

Results of the Strategic Planning Member Board Survey

There were 289 individual returns, with a return rate of 35%, a maximum error range of +/-4.74 percentage points, and a 95% confidence level. Of the respondents, 58% are currently members of a licensing board, 14% are Member Board Administrators, and 53% indicated 6 or more years of involvement with the Council.

In the survey, participants were asked to rank six issues that emerged from the strategic planning workshops at the 2002 Annual Meeting. The order of importance of the issues shown below indicates the results of the written survey. Participants were also asked to approximate how the Council should distribute its time on these six issues. The percentages of time allocation below indicate the results of the survey.

Issues by order of importance

1. Examinations

Participants express concern for the relevance of exams, quality control, security, increased costs, the definition of minimum competency, and the potential for adding practice and ethics questions to the current examinations.

Time allocation for the Council: 20–29%
Most important topics:

- ◆ Relevance of exams
- ◆ Definition of minimum competency
- ◆ Exam security

2. Accreditation

This includes concerns about alignment of ABET criteria with licensure, changes in the core curriculum in engineering, and the relationship of NCEES with ABET.

Time Allocation for the Council: 10–19%
Most Important Topics:

- ◆ Alignment of ABET criteria with licensure
- ◆ Changes in the core curriculum in engineering
- ◆ Relationship of NCEES with ABET

3. Value of Licensure

This encompasses concern about the decreasing number of engineering licensees, promot-

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Strategic planning issues... *(continued from page 6)*

ing licensure to engineering students, promoting the value of engineering licensure as related to quality of life, and informing the public about the importance of selecting licensed practitioners.

Time Allocation for the Council: 10–19%
Most Important Topics:

- ◆ Promoting licensure to engineering students
- ◆ Promoting the value of engineering licensure as related to quality of life
- ◆ Decreasing number of engineering licensees

4. Engineering Licensure Qualifications Task Force (ELQTF)

This issue overlaps most of the above concerns.

Time Allocation for the Council: 10–19%
Most Important Topics:

- ◆ Educational requirements
- ◆ Experience requirements and evaluation
- ◆ Exam modifications, including potential for adding practice-related questions

5. Mobility

This includes interstate and international mobility, uniform adoption of Model Law, electronic signatures and seals, and multistate practice.

Time Allocation for the Council: 10–19%
Most Important Topics:

- ◆ Multistate practice
- ◆ Interstate and international mobility
- ◆ Uniform adoption of Model Law

6. Splintering

This issue focuses on whether or not all engineering disciplines need to be licensed, whether splintering will reduce the number of engineers seeking licensure, and the fiscal impact of providing exams for specialties.

Time Allocation for the Council: 0–9%
Most Important Topics:

- ◆ Testing and licensing of all engineering disciplines
- ◆ The effect of splintering on reducing the number of engineers seeking licensure
- ◆ The fiscal impact of providing exams for specialties

Next Steps

Throughout the strategic planning process, ACCA has created multiple opportunities to include all member viewpoints. The participation of all members is imperative to formulate the best direction for the Council. The ACCA meets in February 2003 to use the compiled data from the survey, as well as the other data gathering opportunities, to define the final strategic plan proposal. The final version will be submitted to the Board of Directors for adoption. If adopted, the strategic plan will be put before the full Council for vote at the 2003 Annual Meeting. Although strategic planning is a time-consuming process, it is necessary and worthwhile to make certain that all members of Member Boards have an opportunity to participate in charting the course of the Council for the coming years. We appreciate your time and input in this process.

*Andrew Liston, P.E., P.L.S.
Chair, Advisory Committee on Council Activities
NCEES Past President*

The ACCA meets in February 2003 to use the compiled data from the survey, as well as the other data gathering opportunities, to define the final strategic plan proposal. The final version will be submitted to the Board of Directors for adoption.

Security breach would be devastating



Ken White, Ph.D., P.E.
Western Zone Vice President

In my mind, NCEES is no better prepared to evaluate education by institutional programs than ABET is prepared to generate adequate national examinations for outcomes assessment.

As a newly confirmed member of the Board of Directors (August 2002), I'm aware that one of my privileges and responsibilities is to keep you, fellow members of NCEES Member Boards, informed. There are many issues facing the Council—issues the Council will have to address in the near future—that we are all concerned about. As the spring zone meetings approach, I would like to share some of my views on a variety of these topics. Perhaps my input will encourage you to think about these issues, talk with other board members, and participate in the discussions at your zone meetings.

Education

Bob Krebs (NCEES President) and Forrest Holly both wrote excellent articles on education issues in the last issue of *Licensure Exchange*. I would encourage anyone, especially newer board members, to read those articles. My experience tells me that most boards accept degrees accredited by the Accreditation Board for Engineering and Technology (ABET) at face value and never question the educational preparation of licensure candidates who graduate from these institutions. The alternatives to accepting these degrees are not very appealing. In my mind, NCEES is no better prepared to evaluate education by institutional programs than ABET is prepared to generate adequate national examinations for outcomes assessment. If NCEES determines that we should evaluate institutional programs, it would require at least the present volunteer efforts required to produce our examinations. In addition, not many institutions would be willing to undergo multiple accreditation reviews. Considering these constraints or barriers, the problem of determining "adequate" education for competent engineers and surveyors may be the greatest challenge facing NCEES in the next few years.

Examination Security

I have been involved in examination preparation as a committee member, as chair of the Civil examination subcommittee, and chair of the Committee on Examinations for Professional Engineers (EPE). From these perspectives, the thought of an examination breach strikes absolute terror. I know the tremendous effort required to generate exam item banks and individual exams, as well as all the psychometric and other evaluations required to ensure fair, equitable examinations. There are significant direct costs in generating and administering the exams, plus even greater indirect costs in time volunteered by professionals. It is truly frightening to consider the many technologies available that may be used to compromise exams (for example, pen-sized scanners) and the determination of certain groups to breach exam security. There are also many opportunities for exam compromise when shipping, storing, and administering exams. The loss of just a few items from the exam banks is discouraging. The thought of losing an entire exam is devastating, not just in direct costs but also in volunteer morale. President Bob Krebs has charged the Examination Security Task Force with reviewing examination security and taking steps to ensure that the possibility of exam compromise is kept to the bare minimum. Although I am confident that this group will generate many useful recommendations, each of us on Member Boards needs to be aware of this significant problem and seek solutions.

Examination Validity and Purpose

Questions frequently arise pertaining to the validity of our examinations and their ability to truly test the competency of engineers and surveyors. Some feel that the examinations are too academic and contain very little evaluation of practical experience. Others question whether any depth of knowledge can be tested using only

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Security breach... *(continued from page 8)*

multiple-choice questions. Other concerns arise about questions that evaluate topics in which candidates may not have gained experience in the first four years after leaving school. We must continue to discuss these questions openly and use them to prompt assessment of the examination process. Such questions and debate are valuable to those in leadership. They help ensure careful consideration and monitoring of the exam development process so that the exams don't drift into becoming simple, ineffective barriers rather than true tests of competence. I believe that the examinations should help confirm educational preparation as well as experience gained as a practicing professional. I am concerned about maintaining this effective evaluation as academic programs are compromised and experience gained by candidates becomes highly focused in limited areas in their first four years of practice.

Revising the Fundamentals of Engineering (FE) Examination

As most board members know, academic programs have been significantly compromised in recent years. By directive of state legislatures, many institutions are limited to 128–130 credits for undergraduate engineering degrees. In addition, many programs are required to maintain nontechnical core courses. The result is that engineering students receive much less breadth and depth in their educational programs. Until recent years, the first two years of engineering programs were very similar to one another, including math, science, and engineering mechanics. Students could transfer to another engineering program and lose very few credits. All engineering students had taken most of the topics found in the morning session of the FE. However, the above forces have caused institutions to reduce or eliminate many of the common core topics found in the FE morning session. That has probably forced us to reduce the cut-

score expectation on the exams or change the exams to all discipline specific. Even then, the common core between institutions in a specific discipline may vary significantly.

Professionalism

In recent months, I have engaged in several discussions with student groups and one panel discussion for the New Mexico Society of Professional Engineers on professionalism and the role licensure plays in professionalism. I am continually amazed that large segments of engineering groups think that the "industrial exemption" provides freedom and independence that favors the individual engineer. Conversely, I think the industrial exemption greatly favors industry owners, such that they can define the qualifications and salary levels of "engineers." They can weaken the qualifications, especially in times of shortages or a tight economy. In addition, engineering groups are very splintered and frequently ignored in the political process and poorly prepared to protect our profession. Unfortunately, according to our historical records, we have been debating these issues ever since licensure began. This long track record without resolution does not provide great encouragement for the future. We must continue to promote professionalism and licensure. I think we need to concentrate this effort on students and young practitioners if we expect to elevate professionalism as a worthy goal for young engineers and surveyors.

The above topics, albeit controversial, are key to the future of the Council. Take time to understand the issues. Don't stop at reading my thoughts—provide your perspective as well, whether to your NCEES board representative, the *Licensure Exchange* editor, your Zone Vice President, or President Bob Krebs. Together we will continue to protect the health, safety, and welfare of our nation and our world.

*Ken White, Ph.D., P.E.
Western Zone Vice President*

The thought of losing an entire exam is devastating, not just in direct costs but also in volunteer morale. President Bob Krebs has charged the Examination Security Task Force with reviewing examination security and taking steps to ensure that the possibility of exam compromise is kept to the bare minimum.

Leadership opportunities plentiful



Mel Hotz, P.E.
Northeast Zone Vice President

The Council is a grass-roots-oriented association, and much of the work that the Council achieves originates in zone meetings and among zone leadership.

The Council is searching for new leaders who can bring a fresh perspective to NCEES discussions. A Vice President's term is only two years, so there is a frequent turnover of people in leadership positions. If you are interested in getting involved and influencing the future of the Council, one way to begin is to take part in committee activity.

Each year, Council members are provided a form and asked to indicate the committees on which they would like to serve. Fill out the form and indicate your desires. It may help to include extra information as to why you have an interest and perhaps to indicate a particular experience that may qualify you for a committee appointment. Though not all Council members can be appointed to a committee in any one year, it is important to take that first step toward increasing your involvement in the Council. Membership in a committee will help you become more informed about NCEES activities and will offer you an opportunity to help broaden NCEES successes.

A variety of new task forces and special committees are appointed annually by the President. Examples for the 2002–2003 year include the Examination Security Task Force (ESTF), the Special Committee on PAKS—Land Surveying, and the Licensure Qualifications Oversight Group (LQOG). These groups are developed to address specific issues confronting the Council. NCEES also has standing committees that are appointed every year, such as the Advisory Committee on Council Activities (ACCA), the Finance Committee, and the Committee on Examinations for Professional Surveyors (EPS). As any new member of the Council quickly realizes, NCEES is an organization with an affinity for creating acronyms. Practically every committee or task force has a shortened form of its name, and there are so many that a list of acronyms is published each year in the *Action Items and Conference Reports*. Though it may not seem believable at first, eventually the alphabet soup becomes quite familiar and easy to use.

Zones also have committees on which members may serve. Be sure to attend your upcoming zone meeting and ask veteran members about participating. The Council is a grass-roots-oriented association, and much of the work that the Council achieves originates in zone meetings and among zone leadership.

In order to become a productive committee member, dust off the copies of the NCEES publications you received when you first joined your board. Hard copies are bound in a bright red notebook, and electronic versions are available on the CouncilNet portion of the NCEES Web site, www.ncees.org. Many of the manuals are revised at our Annual Meeting, and updated copies are available post-August. They contain administrative information as well as model legislative guidelines. They include *Model Law*, *Model Rules of Professional Conduct*, *Constitution and Bylaws*, and *Manual of Policy and Position Statements*.

Other committee opportunities exist in the exam development arena. Each profession and engineering discipline has its own exam development committee. Volunteers are always needed to develop questions, review assembled exams, pretest questions, and determine cut scores. Click on the volunteer section of the NCEES Web site to learn about opportunities for working on examinations, the core of Council activity.

Committees and task forces meet together one to three times during the year, depending on their task. Some may even “meet” electronically via the Web or e-mail. Though these meetings are essential to achieving their mandate, it is important for committee members to attend NCEES annual meetings and zone meetings as well. These offer excellent opportunities to share the committee's work on charges and to receive input from other members. In addition, attendance at annual and zone meetings allows you to network with board members from all over the country and to explore issues of interest to you and to your particular board. This interface opportunity is extremely valuable and offers a chance to exchange views, develop opinions, and determine new solutions that may be useful to the Council and to your board. You will find that many topics you have struggled with for a long time have been answered or at least further developed by other boards. Perhaps when your board is in a leadership position on a particular issue, you may have an insight that will be helpful to the exchange of ideas.

The Council needs your insight and expertise. Consider how you can contribute to the future of engineering and surveying licensure by getting actively involved in the Council.

*Mel Hotz, P.E.
Northeast Zone Vice President*

International forum could eliminate barriers to mobility

My main area of service to the Council in the past few years has been in mobility. I'm proud of the advances in mobility that have come about in the United States in the last few years, but recognize that we still have a long way to go. Though there is still work to do regarding licensure mobility among our own jurisdictions, I believe that we need to better address the issue of international mobility.

International mobility will not come about unless we know and understand the licensing models that are in place elsewhere. I don't believe that we will know and understand one another's systems unless countries concerned about licensure mobility get together specifically to share that information. Such a gathering would not come about without significant advanced planning, organizing, and marketing. I see NCEES, through the United States Council for International Engineering Practice (USCIEP), and the Canadian Council of Professional Engineers (CCPE) as being appropriate and capable of co-sponsoring such a gathering.

The Washington Accord was signed in 1989 by the U.S. Accreditation Board for Engineering and Technology (ABET), the Canadian Engineering Accreditation Board (CEAB), and their counterparts in the United Kingdom, Ireland, Australia, and New Zealand. Other countries have since become signatory to the agreement. The purpose of the Washington Accord is to recognize the equivalency of the outcomes of the accreditation processes that have evolved in the various countries. That function is stated as the following: "... the signatories recognize the substantial equivalence of such programs in satisfying the academic requirements for the practice of engineering at the professional level." This recognition does not dwell on the differences in the details of the system, but rather focuses on the equivalency of the outcomes of the accreditation system.

While I don't know the details of the background of the 1989 signing, I'm willing to bet that there were significant meetings long before 1989 that allowed the ultimate signers to gain familiarity with and trust of the systems in place in other countries. The Washington Accord has allowed licensing boards in signatory countries to recognize the "substantial equivalence" of the outcomes of one another's accreditation systems.

I would like NCEES and the Canadian Council of Professional Engineers to explore the idea of taking the concept of the Washington Accord one step further. This additional step would be to equate not just the educational credential of an applicant, but the bigger picture of the license itself. We in the United States are becoming more and more comfortable not only with the Canadian educational system, but with the equivalence of a P.Eng. and a P.E. The steps taken to initially acquire each license may be different, but if the outcome is the same—that is protection of the public health, safety, and welfare—then why should we care what steps were taken to get there? We are slowly developing that level of comfort with the Canadian licensing system because we have become familiar with it over the years. But what about the Chartered Engineer from the United Kingdom? Or a person licensed by the Commission des Titres d'Ingenieur from France? It may be that the only reason we don't consider them equivalent is that we don't know anything about them.

I envision an International Mobility Forum, similar in format to that held in Calgary in April 2001. It would be co-sponsored by NCEES/USCIEP and CCPE. Invitees would include representatives from any governmental agency that licenses engineers. The program might include oral presentations as well as booths and exhibits from all the attendees explaining their licensing systems and demonstrating the effectiveness of those systems in protecting the public. I envision the meeting being held in a major city like Ottawa or Atlanta. It would have to be self-supporting financially through the collection of registration fees.

The result of this first meeting certainly would not be the signing of anything similar to the Washington Accord, but it could be the start of an acceptance of differences in the licensing systems and a reduction in impediments to mobility. Ultimately it could lead to the development of a Washington Accord-type agreement among government agencies that license engineers. Now is the time to begin planning for such a gathering and exchange of information.

*David L. Curtis, P.E.
Executive Director
Idaho Board of Professional Engineers and
Professional Land Surveyors*



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Executive Director
Idaho Board*

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An engineer who obtains membership on the USCIEP registry affirms to APEC and EMF member countries that he/she possesses specific qualifications and has attained a defined, advanced level of achievement.

USCIEP Registry growth modest but encouraging

January 2003 marks one year since the United States Council for International Engineering Practice (USCIEP) introduced the International Registry of Professional Engineers. Since then, USCIEP has received 16 applications, and 12 engineers have been accepted into the registry. Although these numbers are modest, the USCIEP is pleased with the registry's growth over its first year and has found its progress to be similar to or greater than other international registries.

The USCIEP International Registry for Professional Engineers is a small part of a global effort to better facilitate the mobility of qualified engineers. It is the U.S. counterpart to similar registries in other member countries of the Asia-Pacific Economic Cooperation (APEC) and the Engineers Mobility Forum (EMF). Only countries that are signatories to the APEC and EMF agreements may establish and maintain an international registry. These are Australia, Canada, Hong Kong China, Indonesia, Ireland, Japan, Korea, Malaysia, New Zealand, the Philippines, South Africa, the United Kingdom, and the United States.

Engineers admitted to each registry must meet the minimum requirements for membership on the APEC Engineer Registry and the EMF International Registry as well as the requirements of their home country's register. An engineer who obtains membership on the USCIEP registry affirms to APEC and EMF member countries that he/she possesses specific qualifications and has attained a defined, advanced level of achievement. In a manner similar to the NCEES Records Program, membership with the USCIEP registry also provides a convenient way to communicate with participating countries about one's credentials, experience, and knowledge. Eligibility requirements can be viewed at www.usciep.org.

Who are the people who have applied for registry membership? What do they plan to do with their membership? They are achievement-oriented engineers who want to expand their opportunities. Most applicants have not practiced abroad but plan

to in the near future. Two members have practiced in other countries, one in New Zealand and one in Saudi Arabia. Applicants are from nine different states, including Texas, Illinois, Maryland, West Virginia, Georgia, and California, and the majority practice electrical, mechanical, or structural engineering. So far, two USCIEP registry members have applied for practice privileges in New Zealand. Officials from that country have contacted the NCEES/USCIEP staff liaison to request verification of registry membership. The APEC and EMF registry programs are still in their infancy, so it will be interesting to

see what 2003 holds for these two engineers and for the development of the USCIEP registry. Though currently there are no bilateral recognition agreements between the USCIEP and any of the other signatory countries, registry membership may still assist in expediting applications to practice engineering in other nations.

How can the APEC and EMF registries assist Member Boards? As foreign engineers apply for licensure in the United States and state boards are called upon to evaluate their credentials, registry requirements can

be a supplementary resource upon which Member Boards draw to understand applicants' education, experience, and other qualifications. In every country, an engineer must be recognized for independent practice in order to be eligible for registry membership. Admission requirements for each country's registry are filed at NCEES headquarters and are available to Member Boards upon request. Reviewing these requirements may be useful in understanding the qualifications a foreign applicant has already demonstrated in his/her home jurisdiction to obtain professional status.

As awareness about the registry grows, Member Boards may receive questions from many sources, including U.S.-licensed engineers, non-U.S. engineers, or regulatory bodies in other countries. Contact Lisa Townsend, NCEES/USCIEP staff liaison, at ltownsend@ncees.org. She is available to answer questions, address concerns, and monitor activity in the registry.



L.G. "Skip" Lewis, P.E.
Chair, USCIEP International
Registry Monitoring
Committee
NCEES Past President

How do I know? Why, the Realtor® told me so!

Someone came to see us. He had recently bought a house on an oversized lot. The Realtor told him he could subdivide it into three lots. He had bought it on that basis. I told the prospective client that the first thing would be to survey the lot and see if it could actually be subdivided. It would depend on the frontage, area, locations of the existing structures, setback requirements, and the zoning. It seemed like there were a lot of variables and unknowns for the Realtor to say with such certainty that it could be subdivided into three lots. The prospective client said that it wasn't a problem. The zoning was R-15, and the lot was over 42,000 square feet. I foolishly assumed that R-15 required a minimum of 15,000 square feet. It did. Right away it looked like he was short at least 3,000 square feet. I mentioned that fact. Not a problem: the Realtor told him that most of the lots in the area were between 10,000 and 12,000 square feet. Obviously "they" wouldn't make him provide 15,000-square-foot lots. I was torn between feeling sorry for the guy and trying not to laugh. I explained reality to him. He became somewhat agitated. He paid a lot of money for this property, based upon being able to subdivide it into three lots. The Realtor told him that he could sell the two lots for \$80k each. Take \$160 grand off the purchase price and he got a real deal. Take \$80 grand off the price and he still overpaid. I sat there hoping that he would be able to subdivide at least one lot. I found the subject lot on a plat map and became concerned. The lot had sufficient frontage and area to create two lots; however, success was going to depend on where the house and the garage were located. I asked him if the house was offset on the lot, one way or the other. He didn't think that it was. It was pretty much centered on the lot. The garage was attached on one end. He thought that perhaps the garage was closer to the side property line than the house was to the other line. I wasn't getting warm fuzzy feelings by this time. The prospective client was becoming even more agitated. The Realtor had told him that he could subdivide the property into three parcels. Why was I having such a hard time with that? I asked him if the ads or the purchase and

sales agreement had specifically mentioned that the lot could be subdivided. No sir. The Realtor shared that only with him. Otherwise the owner would have raised the asking price. I told him that his first step was to do the survey. I gave him a proposal and asked for a hefty retainer. I knew that if the survey showed he couldn't subdivide that he was going to blame me. Never heard from him again. I haven't noticed any houses being built on either side of his either.

A client bought a lot. He needed a site plan drawn. He brought in plans for the house. Luckily it would all fit in one zip-code area. The house was huge. It was so huge it wouldn't fit within the setback lines. I called the client and mentioned this trivial fact to him. Not a problem. The property backed up to an open-space area. The open space had been created by the subdivision at the request of the planning board. Therefore, there was no requirement for a rear yard setback. I asked him who had given him that information. Why the Realtor had, naturally. I called the town and spoke to the zoning officer. He didn't think that the client had his information correct either. I called the client, and he in turn called the Realtor: the same Realtor who had already received his commission and now had no interest in the matter. The Realtor told him that he had just been guessing as to what the planning board would do. It seemed to him that if you gave them the land, they should cut you some slack. Ultimately, we went for a zoning variance. The zoning board was indignant. The land had been given to the town to protect the environment. Now the client wanted to crowd right up against it. No way. The client again called the Realtor. And the client was less than nice. This time the Realtor didn't rightfully remember having actually said anything about the rear setback. As a matter of fact, the Realtor rightly remembered the client asking that question, and he, the Realtor, telling him that he should really check that out before he bought the property.

*L. Robert "Larry" Smith, P.E.
Chair, Committee on Examinations for
Professional Engineers*



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Records Program expedites licensure by comity

Perhaps in a perfect world, the professional engineering license would function much like a U.S. driver's license. Having passed the Principles and Practice of Engineering (PE) examination and met other licensure requirements, licensed engineers could practice anywhere in the United States. For engineers looking to expand their services to clients beyond state boundaries, the reality is far more complex. College transcripts, verification of exam passage and current license status, documentation of professional work experience, and references are all required elements for securing licensure in states across the country. Assembling and submitting these documents is a time-consuming task, and yet multiple-jurisdiction licensure is becoming more and more necessary in our increasingly mobile society.

To expedite the process of getting licensed in multiple jurisdictions, the National Council of Examiners for Engineering and Surveying (NCEES) has established the Council Records Program. If you're an engineer or land surveyor licensed in at least one U.S. jurisdiction, this program can save you time and paperwork in obtaining licensure in additional states. A completed Council Record includes a concise report of education, experience, professional references, exam results, and licensure status—all verified by NCEES and available to licensing boards through an electronic network. When you need licensure in another jurisdiction, a copy of your Council Record can be transmitted to that jurisdiction's licensing board.

"Licensure by comity" is a term you've probably come across if you have considered multiple-jurisdiction licensure. All states grant licenses to previously licensed individuals by either comity or reciprocity. Comity, by far the more common practice, means that the state recognizes your status as a professional engineer (P.E.) and exempts you from some of the red tape you'd have to go through if you were not a P.E. Reciprocity means that you are automatically recognized as a professional engineer in one state by virtue of your license in another. Because comity is practiced by most states, the NCEES Records

Program was established primarily to facilitate licensure by comity.

For Denney Pate, senior vice president and principal bridge engineer with Figg Bridge Engineers, Inc., (FIGG) in Tallahassee, Florida, having an NCEES Record has saved significant time and duplication of effort. "Multi-state licensure is critical to FIGG engineers because we design bridges in several states, and our professional engineers need to be licensed in the applicable state to be able to sign and seal plans," he says. "I completed my Council Record in 1999, and since then I've secured P.E. licenses in Ohio, Illinois, New York, Pennsylvania, and (pending) Kentucky, using the convenience of my Council Record."

Judith Nitsch, president of Judith Nitsch Engineering, Inc., of Boston, has also found her Council Record to be an invaluable tool for working across state lines. "I became registered as a professional civil engineer in Massachusetts in 1980," she says. "When I joined a firm in 1982, the firm's president asked me to get my professional civil engineer license in all of the New England states. I applied for several of them individually—that included getting my original exam results, college transcripts, references, etc., forwarded to each state as well as completing each individual state's application. During that process, I learned about NCEES and completed the paperwork necessary to create a Council Record. Having that Record made it so much easier to get the other registrations I needed."

"Soon after that I started doing engineering projects around the country and used NCEES to get licensure in about a dozen other states," Nitsch continues. "Just last month I used NCEES to get my Virginia registration. The small amount of paperwork and minimal fee to keep my NCEES Record up-to-date are well worth the time savings when trying to get licensed in other states."

Tom Jackson, vice president of DMJM+HARRIS of New Orleans, and president of the American Society of Civil Engineers, has held an NCEES Record since 1979. He has used the Records

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If you're an engineer or land surveyor licensed in at least one U.S. jurisdiction, the Records Program can save you time and paperwork in obtaining licensure in additional states.

Please send your board news, including notice of board member changes, to the editor of *Licensure Exchange*, NCEES, P.O. Box 1686, Clemson, SC 29633 or e-mail to lwiliam@ncees.org.

Records Program... *(continued from page 14)*

Program to get registered in Texas, Mississippi, Alabama, and Florida. "I think I speak for most engineers when I say that trying to hustle transcripts from people with busy schedules and getting people to fill out reference forms is a real pain," he says. "That's why the electronic transfer of records is such a great feature of the Records Program. It eliminates those things that take a lot of time and are beyond your control. When you establish a Council Record, you do the work once and that's the last time you'll ever have to do it. If you're pursuing work in other areas and need to be licensed in those areas, the Records Program is invaluable."

The first step toward creating a Council Record is to get an application form from NCEES. You'll provide NCEES with records of your education, work experience, and licensing information as well as five references with knowledge of your engineering reputation. The application process takes two to three months to complete. Each year, you'll receive a renewal form for reporting current information about the past year's activities and an updated reference form.

Charges associated with establishing an NCEES Council Record include a \$150 application fee (or \$100 if you've been a professional engineer or land surveyor for less than a year), \$60 to transmit your active Record to other states, and \$25 to renew your Record each year. These fees are subject to change, so refer to the NCEES Web site, www.ncees.org, for updated information.

Once you've made the initial investment of time, effort, and money to establish a Council Record, there will be no need to duplicate efforts each time you apply for licensure in another jurisdiction. "Having that Record is like money in the bank," as one engineer put it. The NCEES Record contains transcripts, registration information, professional references, and work experience—all in one convenient packet. When you need to get licensed in another state, NCEES transmits a copy of your Record to the appropriate licensing authorities with your written release. Your Council Record is a secure document: it can't be released without your consent, and it cannot be released to any other agency or person.

Many engineers holding a Council Record particularly appreciate having a concise report of their work experience that they can refer to even ten or twenty years down the road. "This is a wonderful feature of the Council Record," says Peggy Abshagen, Executive Director of the Delaware Association of Professional Engineers and an NCEES Board Administrator. "Newly licensed engineers can authenticate and update their work experience in a permanent record for use over a lifetime. It's always available in one place, sparing Record holders from the chore of personally tracking their work history over their entire career. Without a doubt, an NCEES Record is an excellent tool and a worthy investment."

An important component of the NCEES Records Program is the Model Law Engineer (MLE) designation, which NCEES developed in 1995 to further simplify and streamline multiple-state licensure for engineers. Most states have adopted all or parts of the NCEES Model Law, which is a set of "guidepost" engineering licensing laws. "The Model Law Engineer designation is determined through the NCEES Records Program," explains Pam Powell, NCEES Records Program manager. "If an individual meets all the criteria, MLE designation is indicated in their Record and the state can expedite the application for licensure." For a Model Law Engineer, turnaround time for licensure is usually within one to two weeks.

To attain MLE status, applicants must meet four criteria: (1) They must hold an engineering degree accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET); (2) They must have passed the NCEES Fundamentals of Engineering (FE) and Principles and Practice of Engineering (PE) exams; (3) They must have completed four years of acceptable engineering experience from confirmation of a bachelor of science degree in an engineering curriculum to the present; (4) Their license must be clear of any disciplinary action.

Another much-appreciated advantage of the Records Program is speedier license approval. "A Council Record speeds the application approval process tremendously in the majority of licensing jurisdictions," says Abshagen. "I've been told that

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An important point to remember is that having a Council Record facilitates licensure by comity, but it doesn't guarantee licensure in another jurisdiction.

PURPOSE

The purpose of this Council 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 it relates to the welfare of the public in safeguarding life, health, and property. The Council also provides such services as may be required by the boards in their mandate to protect the public.

Constitution Article 2, Section 2.01

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Records Program... *(continued from page 15)*

some can even turn around an approval in 24 hours! Here in Delaware, we're not quite that magical, but the NCEES Record saves our staff the time-consuming task of verifying an applicant's credentials."

"We can often issue a license to a Council Record holder much more quickly than to a non-Record holder," adds NCEES Board Administrator Mark Jones, Executive Director of the Ohio Professional Engineer/Professional Surveyor Board. "In Ohio, an application without an NCEES Record takes 60 to 90 days to process, while an application from an NCEES Record holder takes 30 days. If the applicant is a Model Law Engineer, we can process the application in less than a week."

NCEES Board Administrator David Curtis, Executive Director of the Idaho Board of Registration of Professional Engineers and Professional Land Surveyors, can also attest to the time savings afforded by an NCEES Council Record. "One of my major functions is to conduct preliminary reviews of license applications," he says. "If we receive an application from someone who doesn't have a Council Record, we first have to wait for at least five reference letters, at least one letter of verification of examinations, and at least one transcript from a college or university. When these documents arrive, my staff has to open and collate them. If the applicant is a Council Record holder, none of those things are necessary because the Council Record already contains that information, which is transmitted to us electronically. We appreciate the Council

Record because it is well organized and easy to understand, and it comes from a recognized and reliable source."

An important point to remember is that having a Council Record facilitates licensure by comity, but it doesn't guarantee licensure in another jurisdiction. While NCEES serves as a centralized recordkeeping service, granting licensure is a function of each licensing board. "There is a misconception I've come across, that the Council Record gives you automatic licensure in any state, and that's not true," explains Peggy Abshagen. Applicants are still required to meet a state's licensure requirements and complete at least part of that state's application. As well, a few states may require additional information to supplement the NCEES Council Record. All states, though, accept some aspects of the Council Record, and most accept all aspects. For detailed information about what each jurisdiction requires, contact NCEES or your state board.

Although a Council Record does not completely eliminate the need for paperwork, it does significantly streamline the application process for engineers whose services are needed beyond state borders. "I've always been a big supporter of the Records Program," says Tom Jackson. "I tell everyone that I can about it. It's the best thing for responding to the needs of engineers who are becoming increasingly mobile."

If you would like a copy of this article to use in a board newsletter, contact the Licensure Exchange editor at william@ncees.org.

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