



THE PROFESSIONAL ERGONOMIST

The Newsletter of the BCPE

Board of Certification in Professional Ergonomics • P.O. Box 2811 • Bellingham • Washington • USA •
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REFLECTIONS AND RENEWAL

by *Jerry R. Duncan, Ph.D., CPE*
BCPE President

As we enter a new year, the sixth since BCPE's birth, it is appropriate to reflect on our "child's" first five years of development, and to renew our commitment to support BCPE's healthy growth to maturity and a long life. It was in October 1990 when the gleam in the eyes of some dedicated believers that there was a strong need for certification was brought to life at the Human Factors Society's annual meeting in Orlando, Florida. The birthday in Orlando was scheduled when attempts to establish professional certification as a process within the Human Factors Society proved unsuccessful. Two years after the last unsuccessful Human Factors Society attempt, Dieter Jahns proposed an organization whose mission would be to establish criteria and implement a process for certification of professional ergonomists and human factors professionals. His proposal stimulated much thoughtful debate among the many people playing active roles in promoting professional certification. Much correspondence flowed for months prior to the planned birthday among people representing every point-of-view on the various issues. Surveys of persons interested in certification

were conducted to obtain specific responses to the many questions that needed to be answered. Advice provided by other certification organizations helped in the initial planning and in developing realistic expectations for BCPE's future. In short, much thought and effort went into planning BCPE's birth. Although there were many who contributed to BCPE's beginning, I particularly want to acknowledge the following individuals for their efforts as "Founders": Heather Allen, Al Bottner, Steve Casey, Al Chapanis, Harvey Cohen, Lee Doolittle, Daryle Jean Gardner-Bonneau, Hal Hendrick, Richard Hornick, Marilyn Joyce, Rani Lueder, David Meister, George Peters, Mel Rudov, and Bob Waters.

The infant BCPE had many struggles during its first year. It struggled to establish its identity. It struggled to establish its legitimacy. And, it struggled with learning how to communicate with others. Before being named BCPE, other names that were used briefly or were considered were: "ACE" (Academy of Certified Ergonomists), "BCE" (Board for Certification of Ergonomists), and "BCHFP" (Board of Certified Human Factors Professionals). The struggle for "identity" involved much more than just choosing a name; all aspects of

the purpose, scope, and vision of the new organization were also debated at length. The BCPE also frequently had to respond to questions of its legitimacy. There were some who believed the Human Factors Society was the only possible legitimate parent of certification of ergonomists in the United States. After BCPE's birth, renewed fears and anxieties related to certification were expressed and directed at this new "upstart". Consequently, BCPE increased its efforts to communicate, in many forums, that it would serve the profession well, and that it deserved every professional ergonomist's support.

The images that stand out in my memory of BCPE's first year are those of thoughtful, conscientious debates among nine volunteer directors and the Executive Director building a foundation for a needed certification organization and process to serve the ergonomics profession. The decisions that were made came from people with strong, often differing, opinions working toward a consensus respectful of each other's views and thoughtful of needs of a constituency not directly represented on the Board. This quality was very important in BCPE's early development. BCPE's first birthday was held in San

Francisco in conjunction with the Human Factors Society's annual meeting. By the age of 12-months, BCPE had:

- drafted By-Laws establishing the principles and rules by which the organization would be governed.
- received approval from the Human Factors Society's Executive Council for financial support in the form of a \$20,000, five-year loan.
- established formal communication ties with the Human Factors Society's Industrial Ergonomics Technical Group, with representatives of the American Industrial Hygiene Association, the Board of Certified Safety Professionals, and with leaders in the International Ergonomics Association.
- established a recommended certification procedure and certification criteria.
- established that certification should be based on applicants' demonstrating evidence of experience in system or product design, analysis, and test and evaluation.
- drafted application forms for people wanting to consider BCPE certification.
- drafted a job description and employment contract for the BCPE Executive Director.

By age 18-months, BCPE had achieved the following milestones in its growth:

- received approximately 350 inquiries about certification with the rate of inquiries growing to more than ten per week.
- developed a formal application form and adopted a procedure for processing applications.
- published announcements in various print media that the BCPE was accepting applications for certification

of Professional Ergonomists or Human Factors Professionals.

- adopted a corporate logo.
- had begun drafting a plan for developing a written certification examination.

BCPE celebrated its second birthday in Atlanta, and had added the following achievements to its record of growth:

- had awarded 30 certificates by waiver-of-exam and was receiving applications for certification at the rate of about five per week.
- was influencing other certification efforts around the world (Italian Ergonomics Association, International Ergonomics Association).
- had enlisted certificants to draft representative questions to be used in the written certification examination.

The so-called "terrible twos" experienced in human child development was evident, somewhat, by BCPE's selection of the 1993 mid-year meeting. In an attempt to save money, the meeting was held in Las Vegas in mid-May. Unfortunately, the Grateful Dead were performing in Las Vegas at that time which increased enormously the population density of very interesting, but distracting, life-forms at the hotel. In addition, thieves broke into the car and trailer of one of the Directors and stole some valuable possessions. Despite the venue and shared trauma of being victimized by thieves, much progress was made at the meeting. By the age of 30-months, BCPE had:

- awarded 84 certificates by waiver-of-exam.
- established a newsletter, "The Professional Ergonomist", to focus on communication needs of the professional ergonomics practitioner.

- begun developing a written examination based on the classification of ergonomics topics published in *Ergonomics Abstracts* with questions being formatted as "multiple choice", "short essay", or "long essay" answers.

By its third birthday, which was celebrated in Seattle, BCPE had:

- awarded 135 certificates by waiver-of-exam.
- registered its corporate name and logo as trademarks.
- completed much of the foundation for the written certification examination.

During its fourth year, BCPE helped define levels of expertise expected of ergonomics consultants and professionals proposed in the US Department of Labor, OSHA musculoskeletal-disorder prevention standard. It was also during the fourth year of BCPE's development that the written certification examination was completed. The examination was first administered in Nashville as BCPE turned four years old. Twenty of the 36 people taking the exam successfully passed and earned their BCPE certification. By age 54-months, BCPE had:

- awarded 603 certificates to human factors and ergonomics professionals in 11 countries.
- created an "Associate" level of certification to create a path by which individuals could achieve professional certification in progressive steps.
- made a formal proposal to the Human Factors and Ergonomics Society Executive Council for establishing a relationship to work cooperatively toward mutually beneficial goals that define and unify the human factors and ergonomics profession.
- administered the second

BCPE examination to 28 applicants in 10 locations in the US and Canada.

- established a cooperative agreement with the Center for Registration of European Ergonomists (CREE) to mutually encourage and refer qualified applicants to their respective regional certifying bodies.
- become a member of the National Organization of Competency Assurance (NOCA) to assure that BCPE examination policies, practices and procedures are valid, reliable, and in conformance with principles of fairness commonly subscribed to by voluntary credentialing boards.

The third written examination was administered to 33 people in San Diego as BCPE turned five years old. Twenty-five people successfully passed the exam. Thus, as BCPE begins its sixth year, it has grown to include 661 people who have earned BCPE certificates, and has developed into a strong body and voice for the ergonomics profession. We are very grateful for all who have contributed to BCPE's growth and development. With your continued support, BCPE will continue to grow and to provide needed services to the professional ergonomist and to the ergonomics profession.

THE WWW OF ERGONOMICS

The relatively small community of ergonomists is eagerly exploiting the information-exchange opportunities available on the electronic-superhighway in cyberspace. Christin Grant, PhD, CPE (e-mail: Chris_grant@um.cc.umich.edu) has managed the "ErgoNet" for several years. The Human Factors and Ergonomics Society (HFES) has a home page now <<http://www.hfes.vt.edu/hfes/>> and Peter Budnick, PhD, CPE is working on a home page for BCPE on the ErgoWeb <<http://ergoweb.mech.utah.edu>>. Soon "CybErg 1996" will be hosted by Curtin University of Technology with support from the Ergonomics Society of Australia and the IEA. The rationale behind the idea to run a virtual conference on the Internet is to make it easier, quicker and far cheaper for ergonomists world-wide to attend and participate in an international conference. The conference aims to speed the distribution of ergonomics knowledge, increase the quality of ergonomics

discussion and increase the internationalization of ergonomics. CybErg 1996 will be a general ergonomics conference with papers in four areas: physical ergonomics, cognitive ergonomics, environmental ergonomics and organizational ergonomics. Each paper will consist of text and graphics. People 'attending' the conference will read the papers of their choice and write comments or questions at the end of each paper. Paper 'presenters' will check the comments and questions every day or so and add their comments and answers. Because presenters will have more time to prepare their answers and provide further detail if required, it is hoped the quality of scientific discussion will be improved from the rushed questions and answers commonly necessary at a face-to-face 'flesh' conference. This detailed discussion will continue for the four weeks that the conference is interactive. CybErg 1996 will commence on 1st September 1996 and be interactive until 30th September 1996. After September 1996 an electronic publication of the proceedings will be available at this WWW site. For detailed



A Japan/US Ergonomics Cultural Exchange of Ideas. Foreground (from left to right): Kazuo Tsuchiya, Prof. Munehira Akita, Hiroko Kawamura, Shinichi Sakai. Background: Paul Champney, Janet Wick, Tom Way, Rolf Braune, Steve Wiker, Edie Adams, Jack Sadler, Steve Morrissey, Kevin Simonton, Dieter Jahns, Kerith Zellers, Alvah Bittner, John Campbell, Ian Chong. (Not pictured discussant: Marilyn Joyce)

information on this "virtual conference in cyberspace", look at the CybErg home page <<http://www.curtin.edu.au/conference/cyberg>>. Deadline for abstracts is March 1, 1996 The contact person for this venture is Dr. Leon Straker, Lecturer in Ergonomics, Curtin University of Technology, Selby Street, Shenton Park, WA 6008 Australia, e-mail: cyberg@Kryten.curtin.edu.au, Phone: +61 9 351 3634, FAX: +61 9 351 3636. The BCPE is proposing to moderate a discussion session on "Professional Issues in Ergonomics: The Global Perspective on Education, Experience and Certification." Considering the variety of ways in which many countries are struggling with issues of accreditation and certification, a lively discussion is anticipated, which hopefully will bring some closure to quality assurance for professional practice.

Although new communication technologies "have shrunk the world," the pleasure of meeting with people in real space, rather than "virtual reality" space, can never be replaced. Such an event took place September 26, 1995 at the Seattle Battelle-HF Transportation Center where four colleagues from Japan met with ergonomists from the USA Pacific Northwest. Our Japanese guests (Prof. Munehira Akita, Mr. Kazuo Tsuchiya, Mr. Shinichi Sakai, and Ms Hiroko Kawamura) were on a fact-finding mission (initiated by them) regarding education, certification, employment opportunities, and uses of ergonomists in industry. They also met with some BCPE directors (Steven Casey, Jerry Duncan, Colin Drury), the HFES Executive Director Lynn Strother, and other educators and practitioners in ergonomics on a whirlwind, 13-day tour of the USA and Canada. The Seattle meeting (arranged by BCPE's Dieter Jahns and hosted by Battelle's Dr. John Campbell)

resulted in a very open and congenial exchange of information among participants (see picture) which should help in achieving further cooperation in the future.

Through the efforts of BCPE past-president Hal Hendrick, the BCPE continues to work with the Ergonomics Society of South Africa (ESSA) to become its certification agency. Hal hopes to be traveling to South Africa in May to proctor the BCPE examination "off shore" for the first time. Our cooperation with the Center for Registration of European Ergonomists (CREE) continues. Although we have received no direct, recent communication from CREE, the latest newsletter of the Gesellschaft fur Arbeitswissenschaft (GfA-Germany) reports that CREE is processing the applications of 150 people for the EurErg designation. We also hear that our Canadian colleagues discussed certification at their October 1995 HFAC/ACE meeting. The advisability of using written examinations for certification reportedly was a hotly debated topic. While Canadians debate, 25 BCPE certificants hail from Canada, and we are grateful to the HFAC/ACE staff for proctoring our examination in the spring of 1995 and hopefully again April 8, 1996.

There may be cultural differences in the origin, education and practices of ergonomics throughout the world, but the world-wide tapestry is woven with a common thread. Both old and new communication links will help advance the discipline and the profession.

AVENUES OF SERVICE: A TWO-WAY ROAD

The organizational structure of BCPE consists of nine dedicated ergonomists who freely volunteer their time, talent and other resources to "elevating the importance of BCPE certification in the eyes of potential employers and clients of ergonomists" (Harris, 1995). The policies of these BCPE directors are implemented by a part-time, paid staff operating out of shared office space. There are always more ideas, tasks and controversies to deal with than there are resources available to handle them adequately—a perfect example of the modern business philosophy of "doing more, with less." With a current ratio of 10 directors to 661 certificants, Doug Harris' comment that "we should consider approaches which will involve the participation of the certificants themselves, providing a force multiplier for the efforts we initiate," makes a lot of sense. So far, only the quality assurance function (see related article, page 7) has brought certificants directly into involvement with BCPE mission elements (other than test development and administration, which have always involved certificants).

Enclosed is a short survey which will guide the BCPE in developing a plan for a two-way avenue of services: those to be accomplished by directors and those to be accomplished by certificants all working in harmony to advance the stature of the profession and the quality of its practitioners. Please, complete and mail/fax the survey to BCPE headquarters: P. O. Box 2811, Bellingham WA 98227-2811 or FAX: 360-671-7681. We will compile the data and report the results in the next newsletter. Of course, the more returns we get, the more valid a picture of your ideas as a group we can report.

UNDERSTANDING ERGONOMICS

by Dieter W. Jahns, CPE

In 1989 (right at the time BCPE was forming) Nick Simonelli, PhD, CPE, wrote a delightful chapter on his perspective on the practice of ergonomics based on his experience of working for the 3M Company (Simonelli, 1989). Nick now runs his own company, *Performance Research and Design*, out of Brewster, NY. He starts out by postulating that many fields of study are said to be "interdisciplinary". Ergonomics is no exception since its core subject matter (human performance) is in itself already multifaceted. However, ergonomics has a unique foundation which makes it akin to engineering. The common link between human performance and engineering technology is "system" performance, with the human a key element in the system. To achieve optimum system performance, ergonomists are involved in the specification of 1) which "human factors" are most relevant, 2) the design of human interfaces at the micro and macro levels of systems, and 3) the evaluation of old and new systems in terms of human performance, workload, safety, health, and financial factors. If the human component of the system is determined objectively and scientifically to be the cause of problems, three design options appear obvious: "redesign" the human component by some combination of 1) personnel-selection strategy and/or 2) training strategy, or 3) "get rid of the nut at the controls" by automating (or mechanizing) the system. All three options have been exercised for thousands of years through "natural selection" and the evolutionary development of technologies, but mostly in a haphazard and costly fashion. The systematic

measurement (Greek: *nomos*) of work (Greek: *ergos*) commenced in conjunction with the industrial revolution (Rabinbach, 1990; Rohmert and Luczak, 1989; Amar, 1913), when a variety of sciences were born. Since "productive human work" is one of the mainstays of life, and specialization in careers came into vogue, the discipline of ergonomics grew into a diversity that almost defies description. A "rich interaction of physical forces, social forces, and human performance provides the basis for numerous specialties within (and varying appearances to) the [ergonomics] discipline. It's akin to the parable of the blind men feeling the elephant. What you perceive depends on what specialty you are dealing with. The different specialties ultimately provide the specialist with a variety of entry points into the profession and, similarly, provide the profession with numerous avenues into the corporation. To understand the workings of a successful [ergonomics] effort in a corporation, one must first understand its practitioners and their discipline" (Simonelli, 1989, pg. 89).

That understanding is almost easier in the German language where "Ergonomie" is only one of many "Arbeitswissenschaften" (work sciences) spanning the various social, physical, medical and political sciences which are merged into a cohesive technology of ergonomic system design. In the USA it was still true until very recently that to be an ergonomist one had to be something else first (or at least concurrently) because academic degrees were not granted in ergonomics per se but in a "traditional academic discipline" like psychology, industrial engineering, systems engineering, industrial design, and so on. That made it easy to slip in and out of ergonomics at the whim of job opportunities (e.g., Aldersey-Williams, 1996). "Jack (or Jane) of all trades and

master of none!" was a label that undermined the longstanding mission of ergonomics to humanize technology by means of the system development approach (e.g. Alluisi, 1986; Lippert, 1968). As Karwowski (1995, page 2) has noted "...one can easily see that ergonomics is becoming a target of trivialization efforts by many different constituencies..." The belief, voiced primarily by occupational safety and health advocates, that ergonomics should, and can, be practiced by everyone gives the science and technology a "common sense" appearance which makes ergonomics "everyone's business." The danger is that matters which are everyone's business easily degenerate into nobody's business. That is not a viable basis for a "profession" which, by definition, requires specialized knowledge, skills and experience beyond what is commonly found in people of the general population.

How to educate, train and practice in ergonomics will be the subject matter of the next *Professional Ergonomist* newsletter.

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THE "ASSOCIATE" LEVEL OF CERTIFICATION IS IN PLACE

In keeping with the new BCPE policy to encourage new graduates of ergonomics/human factors academic programs to achieve professional-practice designators in progressive steps, several recent graduates have applied for the "Associate" level of certification. A BCPE review of the academic background of AEP/AHFP candidates is used for qualifying applicants to sit for the "Basic Knowledge" portion of the examination. The "Practices & Principles" (Parts II & III) of the examination can then be taken after fulfilling the other BCPE requirements for the CPE/CHFP designation. Since accreditation of ergonomics academic programs by IEA Federated Societies and certification of individuals are generally based to a very similar Ergonomist Formation Model (EFM), graduates of accredited programs are excused from taking Part I of the exam if their academic transcripts reflect a good academic record in ergonomics and cognate course work. For 1996 the following accredited ergonomics/human

factors programs qualify:
Georgia Institute of Technology (1)
Louisiana State University (2)
New Mexico State University (1)
North Carolina State University (2)
Ohio State University (1)
State University of New York at Buffalo (1,2)
Texas A&M University (1)
University of Central Florida (1)
University of Dayton (1)
University of Illinois at Urbana-Champaign (1)
University of S. California (1)
Virginia Polytechnic Institute & State University (1,2)
(1)=Accreditation by Human Factors & Ergonomics Society (USA)
(2)="Vetting" by Ergonomics Society (U.K.)

Based on these procedures the following people have been granted the AEP/AHFP designator (with the degree granting university shown in parenthesis)
Pieter Kruithof Jr MS AEP (VPI)
Robert C. Nerhood MS AEP (VPI)
Fadi A. Fathallah PhD AEP (OhioState)
Ann Baker MS AEP (NCSU)

FALL 1995 TEST RESULTS AND NEW CERTIFICANTS

Twenty-five ergonomists spent a more relaxed Thanksgiving knowing that they had successfully passed the BCPE's October certification examination. Eight of the 33 who took the examination will have the opportunity to "measure up" by taking the exam again. Test scores were statistically consistent with those of previous candidates (Fall 1994, Spring 1995), and the overall "pass rate" for applicants now stands at 67%. The following people will be added to the next edition of the BCPE Directory of Certificants (currently listing 622 names):
Paul S. Adams PhD CPE
Wayne P. Adams MS CPE

George A. Alcalde MA CPE
Dennis A. Attwood PhD CPE
Richard T. Barker MA CPE
Shirley M. Beconsall MS CPE
Colin J. Brigham MS CIH CSP CPE
Van C. Calvez MS CPE
John A. Ciciora BS CPE
Karen D. Cunningham MS CPE
Gerhard P.H. Deffner PhD CHFP
William G. Elliott MS CPE
John E. Fabry, Jr. PhD CHFP
Daniel P. Gottesman MSIE CPE
Glenn Harrington BSc CPE
Walter H. Hawkins PhD CHFP
John E. Johnson PhD CPE
Robert Karasek PhD CPE
Robert K. Kato BS CPE
John Kelling BA CPE

Arthur H. Koenig PhD CHFP
Jack Larks MSCE Med CHFP
Alfred T. Lee PhD CPE
Krishna K. Menon PhD CPE
Barbara A. Merrill MA CPE
Vicki J. Missar MS CPE
Robert R. Moritz MA CPE
Paul R. Myers BS CPE
Chandra M. Nair MS CPE
Frederick J. Norton MS CPE
Maury A. Nussbaum PhD CPE
Michael E. Palmer BS CPE
Marla P. Perper Rabrich BA CPE
Christopher C. Plott MBA CPE
Henry A. Romero MS CPE
Thomas S. Rowell MS CPE
Lawrence J. H. Schulze PhD CPE
Judith P. Sehnal MS CPE
Thomas H. Smolarek MS CPE

THE QUALITY ASSESSMENT AND ASSURANCE COMMITTEE

Unregulated, free markets in ideas, goods and services foster innovation and diversity in jobs and technology. However, market-driven innovation, at least early on, also often increases "hype" and "shamanism" when market demand exceeds supply by a significant amount. The old market rule of *caveat emptor* (let the buyer beware) can then only be effective if the "market" can truly differentiate between hype and quality. Ergonomics got caught in these market forces when productivism, safety, health and risk management concerns escalated in the 1980s. Primarily industrial ergonomics and consumer-product ergonomics were (and are) being queried for "quick solutions" after being ignored for research and development (R & D) funding for too many years. But if the market wants ergonomics, it will get something with that label! Consequently, creative people rapidly developed design features, training courses, and marketing methodologies which were "ergonomic" whether or not based on good ergonomic (functional, human-factors) science. This trend has, in turn, created a quality assurance problem for the science and technology of ergonomics.

To deal with the underlying issues, the BCPE has formed a quality assessment and assurance committee (QAAC) to look at problems of "quackery" (no pun intended!). The committee is composed of BCPE certificants who, in addition to their ergonomics/human factors credentials, also bring extensive experience from other disciplines to bear on the problem:

Robert L. Getty, Ph.D., CPE,
CQE (Certified Quality

Engineer) serves as chairman.

Other members of the committee are:

Heather W. Allen, Ph.D., CPE
Russell A. Benel, Ph.D., CHFP
Roger L. Brauer, Ph.D., CPE,
CSP (Certified Safety Professional), P.E.

(Professional Engineer)
Mary O. Brophy, Ph.D. CPE,
CIH (Certified Industrial Hygienist)

Frederick W. Imker, M.A., CPE
Donald L. Morelli, MSIE, CPE

The initial charter of this committee is to study, evaluate, comment and advise the BCPE regarding professional development issues which affect the practice of ergonomics/human factors as a unique occupation and profession. Efforts include, but are not limited to, evaluation of 1) certification and accreditation agencies in ergonomics; 2) the development of technical standards by other organizations impacting ergonomics practices; 3) education/training offerings in ergonomics/human factors; 4) the marketing of ergonomics services; and 5) ergonomics practice/organizational management.

As Bob Getty has said: "It may well be that some people feel that they are fully capable and have the qualifications to perform as ergonomists; they are simply finding better ways of marketing their skills. However, the myriad of individuals claiming certification (by organizations other than BCPE) is creating confusion regarding what is genuine certification in the ergonomics profession." Therefore, the QAAC will look at programs brought to its attention and delineate their shortcomings (or superiorities) relative to the BCPE program. Since this is a new committee, any suggestions regarding its focus, or requests for specific evaluations will be welcome. Contact any of the members or send comments and

inquiries to the BCPE office at the address shown in the newsletter masthead.

Although it is true in the market place that the buyer should beware, the consumer of ergonomics or human factors engineering services deserves to have the best understanding of what truly is a Certified Professional Ergonomist or Certified Human Factors Professional. Future articles in this newsletter and other publications will attempt to provide this information

PROPOSED E-MAIL LIST FOR BCPE CERTIFICANTS

by Peter Budnick, Ph.D., CPE

Electronic mail (e-mail) offers a fast, effective, and relatively economical means of communication. Through an e-mail mailing list, often referred to as a "listserv," any number of people can participate, either actively, by posting and responding to messages, or passively, by merely monitoring the list. Members are free to subscribe and unsubscribe at any time.

E-mail lists operate like an automated messaging system, where list members send messages to one address, and a copy of the message is then automatically sent, by e-mail, to each person on the list. A list can be moderated by one or more individuals, or it can be open to any message from any person or organization. On a *moderated* list, each subscriber is manually approved or disapproved by the moderator(s), and each message is screened for appropriateness prior to being reflected to the entire list. Moderation provides some quality control, reducing the level of "noise" on a list by eliminating inappropriate

materials, including unsolicited advertisements and abusive or unprofessional messages.

I propose a *moderated* list restricted to BCPE Certificants. On such a list, message content might be informational, such as conference announcements, or it might be opinion oriented, such as discussing standardization or professional credentialing issues. Either way, an e-mail list is an excellent way to keep abreast of current issues in our profession, and can provide a crucial conduit for communicating ideas, opinions, and information relevant to all BCPE Certificants.

To get the ball rolling, I volunteer to set-up, administer, and initially moderate a list, tentatively called BCPE-PEN list. If you are interested in joining the list, please contact me by e-mailing budnick@ergoweb.mech.utah.edu, or call me at (801) 581-4160.

THANKS TO AUBURN ENGINEERS, INC.

About 75 people enjoyed lively discussions and collegiality at the BCPE networking reception held October 12, 1995 at the HFES meeting hotel in San Diego, CA. While attendees sidled up to a cash-bar, food and ambiance were financed by a very generous donation from David C. Alexander, MSIE, CPE, President of Auburn Engineers, Inc., who the day before had delivered an excellent *Arnold Small Lecture in Safety* titled: "The Economics of Ergonomics: Part II." It's friends like that who compensate for the agony of tight budgets and low cash flow. Hopefully, those of you who were there will express your personal thanks to David the next time the opportunity arises. It looks like the BCPE

Networking Reception is the start of a tradition, so look for it to be repeated at the HFES meeting in Philadelphia, PA right after Labor Day (week of 2-6 September).

1996 CERTIFICATION EXAM SCHEDULE

Spring Exam:
April 8, 1996
Applications due
February 8, 1996
Given at various locations
in the USA and Canada

Fall Exam:
September 1, 1996
Applications due
July 1, 1996
Philadelphia PA

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