

IEA COUNCIL MEETING 1999

Petros Nomicos Conference Centre, Fira, Santorini

September 2-3, 1999

Designation: XX.GR

MATERIALS FOR COUNCIL MEETING

Starting time
2 September: 9.00 am

Liaisons

Ergonomics Delegation to the People's Republic of China

I had the privilege of leading an Ergonomics Delegation to China, October 19 to 31, 1998. Under the auspices of the U.S.-based People to People Ambassador Programs, the purpose of the ergonomics delegation was to foster a greater mutual understanding of ergonomic trends, issues, and priorities through open exchange of views and ideas. The People to People Program seeks to promote world peace through international understanding and cooperation among the peoples of the world.

The People's Republic of China is a country of 1.2 billion people with one of the world's fastest-growing economies. Its vast human resources and burgeoning industrial infrastructure pose socio-technical challenges that are as unique as they are profound. The country is a veritable laboratory for the study of human assertiveness and adaptation in a changing world.

The ten delegates found the trip to be professionally and culturally rewarding beyond conceivable expectation. Few of us really understood what lay in store for us prior to taking the trip, and, indeed, the impact the trip would have on our view of our discipline and the role of culture and technology on the organization and nature of work and society as a whole. We truly gained important insight, opened new channels of communication and developed new friendships both within the group and with our Chinese counterparts.

The professional highlight of the trip was joining the quarterly conference of the China Ergonomic Society. We were received warmly by Dr. Zhang Kan, the President of CES, and the more than 70 delegates. The meeting underscored the value of international dialogue.

JES

I had the pleasure of meeting ten members of the Board of the Japan Ergonomics Society during a business trip to Tokyo in May, 1999. At the dinner meeting we talked about issues of common interest. We also discussed ergonomics standards and the need for IEA to become more involved in international standards (e.g., ISO/TC159). We also talked about the certification program which is being established in Japan. I thank Prof. Ohkubo, President of JES, for arranging the visit and his very warm hospitality.

SELF

I have been invited to address delegates at the opening plenary of the XXXIV^{ème} congrès of the Societe d'ergonomie de langue française (SELF). The SELF meeting will be held in Caen, September 15-17, 1999. This will be a good opportunity to make SELF members more aware of IEA and to encourage greater participation in technical committees and other IEA activities.

WHO

Prof. Mattila represented the IEA at a meeting of World Health Organization Collaborating Centres in Occupational Health, held in Helsinki, June 7-9, 1999. This meeting was very productive: 40 centres of 52 were present plus invited organizations such as the IEA. The main focus was Implementation of the Global Strategy on Occupational Health for all. The discussions highlighted achievements by the Collaboration Centres and explored the relationship between occupational health and sustainable development.

The scientific meeting discussed the topic Psychological Stress at Work. The meeting was important especially because it provided an opportunity for key persons from different countries to come together and discuss the current trends.

Slovakia Ergonomics Society

On the occasion of my recent visit to Vienna where I presented the opening plenary address at the International (ISATA), I contacted ergonomists in the Czech Republic and Slovakia to arrange liaison visits. Attempts to contact Prof. Sablik were unsuccessful. However, I was able to contact Dr. Hatiar (through Dr. Gilbertová), Head of Ergonomics Department at the Institute of Preventive and Clinical Medicine in Bratislava. I visited him on June 17, 1999 and also met with the Director of the Institute, Dr. Tomas Trnovec. The institute has nearly 400 employees, five of whom work in the Ergonomics Department in the area of occupational ergonomics and rehabilitation. Dr. Hatiar is collaborating with Dr. Thomas Cook, Professor of Preventive Medicine & Environmental Health and Physical Therapy at Iowa University (one of several Fogarty Centers under grant from U.S. National Institute of Health to facilitate collaborative research between U.S. scientists and investigators in the developing world as well as in Central and Eastern Europe, and countries of the former Soviet Union (FSU). Tom was present during my visit as he was preparing to conduct the 19th of a series of workshops in ergonomics near Bratislava. He emphasized the need for long-term relationships with developing countries and the need to understand the local context and culture in developing ergonomics programs. We discussed the possibility of IEA/NIH collaboration in industrially developing countries and will pursue this through the IDCC. Tom will continue to work in Slovakia for six months under a Fullbright grant.

Ergonomics in Slovakia is under-developed, primarily due to the difficult economic conditions in the country. However, Dr. Hatiar was extremely interested in contact with IEA and promised to investigate the possibility of reactivating the society. I found the visit to be most worthwhile.

Czech Ergonomics Society

In Prague I met with Dr. Formánek, of the National Institute of Public Health, Centre for Industrial Hygiene and Occupational Diseases, and past president of the Czech Ergonomics Society, as well as with Dr. Milo_ Palecek, Director of Research Institute of Occupational Safety. The purpose was to learn more about ergonomics in the Czech Republic and the situation in their society. Dr. Sylva Gilbertová, (Dept. of Rehabilitation Medicine, Postgraduate Medical School) President of CzES, was in Greece at the time of my visit but she was instrumental in coordinating my visit to Prague and Bratislava.

The Czech Republic is in a state of economic transition, not unlike other countries in central and eastern Europe. These countries are preoccupied with development of industry and infrastructure, occupational health and safety being largely ignored. Moreover, foreign enterprises that establish operations in these countries tend to bring their own technologies and ergonomic solutions. Consequently the local ergonomics community is small and struggling to establish itself. Communication within the ergonomics community is through informal contact of individuals rather than through meetings and newsletters, though ergonomists do participate in related conferences such as safety.

We discussed a variety of issues. Perhaps the most interesting is the role of cultural, motivational and work ethics factors on work. Ergonomics and Work Ethics may be a good topic for a regional conference in central and eastern Europe. Another common theme seems to be that workers are willing to trade economic incentives for working conditions and occupational hazards. The establishment of an electronic journal was very positive received despite the slow penetration of Internet and difficulties with English. There is also interest in distance education in ergonomics. A recurring theme was the need to convince managers of the value of ergonomics and to define the field. This is an area in which the IEA may be able to help.

Dr. Formánek arranged for me to be interviewed by a science writer for the daily newspaper "Lidove noviny" published in Prague. The interview went very well and Dr. Formánek believes the article will help stimulate interest in ergonomics. The writer was relatively well informed about ergonomics and I was asked several questions concerning the definition of the field, its history and its branches. I was also asked for case studies which document the value of ergonomics. I became more convinced than ever before of the need for definitions and elaboration of the domains of specialization.

MOU's

The Memorandum of Understanding with ICOH has had positive results. For example, the IEA Technical Committee on Musculoskeletal Disorders in collaboration with ICOH produced a "Consensus Document on Upper Body Musculoskeletal Disorders". We have also communicated concerning the mutual promotion of conferences. Unfortunately, ICOH has rescheduled their triennial congress to fall on the

same years as the IEA triennial congress. However, we have resolved to minimize potential conflicts and to contribute to each other's technical programs.

The Memorandum of Understanding with International Association of Applied Psychologists (IAAP) comes due in July, 1999. I have been in touch with Prof. Charles D. Spielberger, President of IAAP, to express our interest in extending the MOU and exploring ways of strengthening our relationship.

EXPO 2000

The IEA is represented by Prof. Heiner Bubb on the Advisory Board for the World Engineers Convention at the World Exposition EXPO 2000, Hannover, Germany. We believe that IEA participation in the Advisory Board offers an exciting opportunity to promote ergonomics within the engineering community. Five Professional Congresses are being organized under the following themes: information and communication; environment, climate and health; mobility; energy; and future of work. Further information about these events can be found on www.expo2000.de.

Activities

The various standing and technical committees of the IEA have been busy on a variety of activities, which are described in more detail in the reports of the officers and committee chairs. In this report, I highlight what I believe to be some of the current priorities.

LM Prize

Last year, we inaugurated the Liberty Mutual Prize in Ergonomics and Occupational Safety. The award of US \$ 5,000 seeks to recognize outstanding original research leading to the reduction or mitigation of work-related injuries and/or to the advancement of theory, understanding and development of occupational safety research. In addition, every three years, the Liberty Mutual Medal in Ergonomics and Occupational Safety, is given to the best of the three awardees during the last three years. This award consists of a medal and US\$ 15,000 and will be handed out for the first time at the congress in San Diego year 2000.

This prize provides an excellent vehicle for the IEA to promote ergonomics within private and public sectors, academia and the general public. We hope that it will stimulate other organizations to find similarly creative ways to express their support for the science of ergonomics.

The prize was awarded during the banquet of the Human Factors and Ergonomics Society to Andrew S. Imada, Ph.D., of A.S. Imada Associates for his paper entitled "A Macroergonomic Approach to Reducing Work-Related Injuries".

KU Smith Student Award

The IEA K.U. Smith Student Award which was launched in 1997 is now firmly established. An agreement with the St. Paul Foundation which provides overall management of the Fund. The award provides a tangible means by which the IEA can further its objectives to encourage the development of the discipline, to foster scholarship and to recognize worthy achievements.

IEA Journal of Ergonomics

The IEA has undertaken to publish an electronic journal. The first issue is in preparation and will be available on the IEA web site soon. This will become a widely accessible forum for exchanging scientific and technical information in the field of ergonomics. It is important to disseminate information about this journal as widely as possible. One of the advantages of this approach is that it will provide a means for disseminating information quickly and it will be accessible to ergonomists worldwide, including industrially developing countries.

Ergonomics International

The Editor of EI, Mr. Andy Marshall, has assumed editorial responsibilities from Stephen Konz and has continued publication of the newsletter in traditionally high standards of quality and content. Andy is recruiting regional editors.

ODAM

The IEA conference on Organizational Design and Management, ODAM VI, held August 19-22, 1998 was very successful. Overviews by Peter Vink, Steven Dhondt, Marc Peters and Ernst Koningsveld were titled: Balancing Organizational, Technical and Human Factors. The IEA is deeply indebted to the organizers for their hard work in continuing this excellent series of conferences.

Global Ergonomics Conference

The Global Conference held in Cape Town, September 1998, was a resounding success, thanks to the work of Pat Scott and conference organizers. A large part of the program was devoted to ergonomics issues in industrially developing countries, primarily in Africa. A forum was held to explore ways in which the IEA could help promote ergonomics in IDC's. The result was the creation of a network of people interested in ergonomics in IDC's.

IEA/ILO Checkpoints in Agriculture

Negotiations with ILO on the publication of the Checkpoints is proceeding and we expect to have an agreement before the Council meeting. Dr. Kogi has invited potential authors to contribute to this project.

IEA2000

Plans for the 14th IEA triennial Congress are proceeding exceedingly well, under the leadership of Hal Hendrick. This will undoubtedly be the largest Congress for many years to come since it will also be the annual meeting of the Human Factors and Ergonomics Society. The Congress will take place in San Diego, California, July 29 to August 4, 2000. Organizers anticipate 430 technical sessions and over 2500 participants.

The IEA is considering organizing a forum for Presidents (and/or officers) of IEA member societies to compare the status of ergonomics in their countries and to discuss areas of mutual interest.

Strategic Plan

The Strategic Plan was revised to reflect many of the ideas generated during the focus groups held during the Cape Town Council meeting. The revised Strategic Plan is attached. Specific elements of the strategic plan were assigned to chairs of standing committees who are to develop action plans. Some strategies are already underway and others will be initiated over the next year.

Definitions

I believe there is a need for the IEA to define the discipline of ergonomics and its branches in a way that is concise, succinct, and unambiguous. All of us are asked to explain ergonomics or human factors, its unique knowledge content, how the discipline is bound and differentiated from related disciplines. Although we all have a common understanding, we may not necessarily offer a consistent answer?

Definitions help clarify the field and promote understanding and communication within the ergonomics community as well as with professionals and lay people outside the field. Several studies (CSERIAC, Hancock) have documented the existence of a diversity of definitions for "ergonomics". Inconsistency of definitions may hinder efforts to advance or promote the discipline. There are also regional differences in focus and approach to ergonomics. On the other hand, universally-accepted definitions that articulate the core science hold more strength than definitions that reflect regional orientations or individual opinion. The IEA is uniquely positioned to tackle this task, provided we can obtain international consensus among professional ergonomists (academic and practitioner). Because it is a federation of ergonomics societies around the world, the IEA represents the broad spectrum of interests of the field. Thus, the IEA is arguably the highest authority on the subject.

There is widespread, though not necessarily unanimous, support for the IEA's role in addressing this need. However, we believe that there is a compelling need to promulgate an authoritative definition that can be widely referenced and that will help project a message and image that is professional and informative to the outside world.

The task of the IEA Executive Committee (EC) is not to impose definitions - the task of the EC is to manage a process that engages the international community in defining the field. The EC discussion draft which is attached is intended to initiate the process - a process that must involve all federated societies. Federated societies want and need to be involved in IEA activities, especially activities that concern the discipline as a whole.

Attached to this report are draft definitions of ergonomics and certain domains of specialization. The definitions of the domains of specialization described in the attachment are not necessarily mutually exclusive nor comprehensive. It is not essential that we define the entire field, but we need to start somewhere.

We propose to have the Council divide into focus groups to discuss these definitions, as we did in considering the strategic plan. I anticipate the subject to generate controversy, but I believe this is healthy and that it is overdue. Discussions about the fundamental nature and scope of our discipline reinforce the foundation that will facilitate the maturation of the discipline in the new millennium. Based on Council input and subsequent deliberations we hope to present a set of definitions for approval at the San Diego Council meeting. If we can achieve this, perhaps it would be appropriate to commemorate this milestone at the Congress with a formal declaration of the definition of ergonomics and its and domains of specialization.

INTERNATIONAL ERGONOMICS ASSOCIATION

Draft Strategic Plan
(June 4, 1999)

ERGONOMICS

Ergonomics (or human factors) is the scientific discipline concerned with interactions among humans and other elements of a system in carrying out a purposeful activity. Ergonomics aims to improve human well-being and overall system performance by optimizing the compatibility between humans and other system components; that is, by matching systems, products, procedures and environments to the needs, abilities and limitations of people. Human-system analysis, design, and evaluation includes considerations of physical, cognitive, social, organizational, environmental and other relevant factors.

IEA MISSION STATEMENT

The International Ergonomics Association is the federation of ergonomics and human factors societies around the world. Working closely with its constituent societies and related international organizations, its mission is to elaborate and advance ergonomics science and practice, and to expand its scope of application and contribution to society to improve the quality of life.

GOALS: THE FOLLOWING PRINCIPAL GOALS REFLECT THE IEA MISSION

- A. To develop more effective communication and collaboration with federated societies
- B. To advance the science and practice of ergonomics at an international level
- C. To enhance the contribution of the ergonomics discipline to global society

A. GOAL: TO DEVELOP MORE EFFECTIVE COMMUNICATION AND COLLABORATION WITH FEDERATED SOCIETIES

OBJECTIVE: A1. Support The Work Of Member Societies

Strategies:

1. Facilitate visibility of each member society through the IEA home page and other means of communication
2. Facilitate joint events between member societies where this will not conflict with the operations of these so
3. Support member societies in taking proactive and reactive positions on major public issues and in their use of the media {EC}
4. Support member societies to disseminate ergonomics knowledge at various levels {P&P/IDC/S&T}
5. Support participation of the industrially developing countries in IEA activities (e.g., support for travel to conferen
6. Support the continuing growth of ergonomics in industrially developing countries by training and educatio
7. Provide industrially developing countries with ergonomics knowledge by stimulating the existing IEA mechan
8. Show best practices in order to stimulate the growth of ergonomics {IDC/S&T}

OBJECTIVE: A2. Improve IEA Operational Effectiveness

Strategies:

1. Develop mechanisms for effectively involving member societies in IEA activities (e.g. possibilities for strategic discussions) {EC/P&D}
2. Improve communication with member societies (e.g. through consultation, exchange of action plans and soliciting feedback) {SG}
3. Facilitate the exchange of views and experiences among the leaders of member societies (e.g., through workshops, sessions, special interest groups) {P&D}
4. Initiate campaign to increase the numbers of sustaining IEA members where this will not conflict with the operations of member societies {Tres/P&D}
5. Increase revenues from donations, endowments and funds where this will not conflict with the operations of member societies (e.g. from international bodies) {Tres/P&D}

B. GOAL: TO ADVANCE THE SCIENCE AND PRACTICE OF ERGONOMICS AT AN INTERNATIONAL LEVEL

OBJECTIVE: B1. Stimulate Development And Acceptance OF Ergonomics

Strategies:

1. Define and clarify the field of ergonomics {EC/P&P}
2. Elaborate and promote the benefits of ergonomics to improve the quality of life for individuals, organizations and society {EC/P&P}
3. Identify and elaborate cultural and economic differences on ergonomic design {EC/P&P}
4. Identify future needs for development of ergonomics (e.g. through the Technical Committees of the Science & Technology Committee) {S&T/P&D}

OBJECTIVE: B2. Facilitate Knowledge Exchange And Collaboration

Strategies:

1. Support and promote specialized conferences and workshops in collaboration with member societies. {S&T}
2. Provide appropriate support of regional groups in ergonomics (e.g. FEES) where this will not conflict with the operations of member societies. {P&D}
3. Promote IEA publications suited to knowledge dissemination by IEA {P&P}

OBJECTIVE: B3. Enhance The Quality Of Professional Practice And Education In Ergonomics

Strategies:

1. Continue to promote a broad view of ergonomics and its aims {P&P}
2. Consider development of procedures for the IEA endorsements of various activities, in particular journals and books {P&D}

3. Develop international professional standards and guidelines and promote best practices in ergonomics (code of ethics, code of professional practice, etc.) {PP&E}
4. Encourage educational institutions to offer ergonomics programs consistent with "IEA Core Competencies for Practitioners in Ergonomics" criteria {PP&E}
5. Promote sharing of quality ergonomics education programs available on the Internet through the IEA home page {PP&E}
6. Develop IEA guidelines for accreditation of ergonomics educational programs {PP&E}
7. Maintain the IEA Criteria for Endorsement of Certifying Bodies and implement a system for such endorsement {PP&E/P&D}
8. Maintain the IEA Core Competencies for Practitioners in ergonomics {PP&E}
9. Maintain and disseminate IEA minimum criteria for the process of certification of an ergonomist {PP&E}

C. GOAL: TO ENHANCE THE CONTRIBUTION OF THE ERGONOMICS DISCIPLINE TO GLOBAL SOCIETY

OBJECTIVE: C1. Promote Recognition Of Ergonomics Discipline

Strategies:

1. Identify specific areas where greater international exchange of information is needed, and develop appropriate means for dialogue {S&T}
2. Promote ergonomics in geographical regions where particular support is needed {IDC}
3. Increase public awareness of the benefits of ergonomics through mass media communications {SG/P&P}
4. Provide information about ergonomics/IEA for listing in international directories and reference publications {SG}
5. Expand and strengthen links with other international bodies and form alliances with affiliated societies in the related fields (e.g., industrial design and engineering, psychology, safety, health care, economics) {Pres}
6. Expand IEA prizes to reward and publicize ergonomics innovations {Awards}
7. Develop more effective use of IEA conferences to promote added value of ergonomics to society {P&P}

OBJECTIVE: C2. Promote Applications of Ergonomics in All Aspects of Life

Strategies:

1. Promote ergonomics as a means to improve the quality of human life, work effectiveness and economic benefits {P&P}
2. Mobilize ergonomics profession to address major global challenges {EC}
3. Promote collaboration in ergonomics projects among government and international bodies {P&D}

4. Stimulate the involvement of ergonomics in the emerging fields of application (e.g. management sciences and mass communication). {S&T}

The Discipline of Ergonomics - Definitions

Ergonomics: Ergonomics (or human factors) is the scientific discipline concerned with interactions among humans and other elements of a system in carrying out a purposeful activity. Ergonomics aims to improve human well-being and overall system performance by optimizing the compatibility between humans and other system components; that is, by matching systems, products, procedures and environments to the needs, abilities and limitations of people. Human-system analysis, design, and evaluation includes considerations of physical, cognitive, social, organizational, environmental and other relevant factors.

Applied ergonomics: the application of human-system interface technology to the analysis, design and evaluation of systems involving people, including hardware, software, jobs, environments, and organizational structures and processes. This technology includes knowledge about human characteristics and relevant human-system methodologies.

Domains of specialization

Ergonomics is a systems-oriented discipline and practicing ergonomists must have a broad understanding of its full scope. Nonetheless, there are domains of specialization within the discipline, which represent deeper competencies in specific human attributes. These domains of specialization correspond to content knowledge about people rather than system attributes or economic sectors¹.

The domains of specialization within the discipline of ergonomics include;

Physical ergonomics is concerned with the compatibility between human anatomical, anthropometric, physiological and biomechanical characteristics and the static and dynamic parameters of physical work. *(Relevant issues include working postures, materials handling, repetitive movements, work related musculoskeletal disorders, safety and health.)*

Cognitive ergonomics is concerned with mental processes, such as perception, human information processing, motor response, as it relates to human interactions with other elements of a system while carrying out a purposeful activity. *(Relevant topics include perception, attention, workload, decision-making, motor response, skill, memory and learning as these may relate to human system design.)*

Social or organizational ergonomics is concerned with the optimization of work systems, including their organizational structures, policies, and processes. *(Relevant topics include human system considerations in communication, crew resource management, work design and management, teamwork, participatory design, cooperative work, TQM.)*

¹ Ergonomists often work in particular economic sectors or application domains, such as transportation and process control. However, application domains are not mutually exclusive and they change constantly (new ones are created and old ones take new directions), making it nearly impossible to define a useful and comprehensive set of application domains. Moreover, ergonomists can cross application domains and work effectively after an appropriate amount of familiarization. Hence, it is not useful to define application domains. It is far more difficult to cross domains of specialization without extensive academic training.

Policy for Equal Opportunities within the International Ergonomics Association

1.1. GR

Proposal by Toni Ivergard, Östersund Branch of the Swedish National Institute of Working Life. E-mail:

This is a policy statement about equal opportunities within the International Ergonomics Association. Also included are some comments, examples and possible measures to bring about improved and increased levels of equal opportunity. This is not a detailed plan of action. A plan of action can only be realized and created by the Council Members themselves within their working process.

Our relations and the way we treat each other within the IEA, the way we formalize our organization and its procedures must be a reflection of our external work within the field of ergonomics both in society as well as industry. A basic condition and integral part of our value culture as regards our external work is, of course, to offer all possible users integrated equal opportunity `solutions`. This includes considering the needs of men and women of all races, disabilities and handicaps. Individuals are to be seen as whole human beings, where not only anthropometric, physiological, psychological and social characteristics are important, but also cultural and national.

In our internal work in the IEA, equal opportunities issues have to be considered as regards:

We should always use a non-discriminatory language in all documents, rules (regulations) and procedures.

We understand the importance of having people of different racial, religious and gender backgrounds as representatives and officers on the board and council of the IEA.

Women and men, individuals with different handicaps, disabilities, and varying ethnic and social backgrounds have different value structures and tend to relate to each other in different ways. It is important that we in our organization and in our work as professionals respect these differences.

A standing item on the agenda of all council meetings should be the discussion of the agenda and the risk for discriminatory decisions as regards different items of the agenda. The secretary of the IEA should produce a document, which would provide the basis for a discussion of this point.

Secretary General' Report

1.2.GR

July 1998 - July 1999

0. PREFACE

Currently, the main responsibilities of the Secretary General/SG include the following:

1. Functioning as the IEA Secretary General:

- Providing logistical support and advice on the various IEA related-matters to the President and Treasurer
- Facilitating the Executive Committee's plans and activities
- Preparation of IEA documents for the EC and Council meetings (meeting agenda, minutes, logistics)
- Maintaining the IEA Basic Documents
- Maintaining the IEA Roster

2. Networking with the members of EC and the COUNCIL

- Communicating with the IEA Council and IEA Federated Societies
- Communicating with other societies and organizations around the world/ in coordination with the President

3. Networking with others outside the IEA community

4. Managing the IEA secretariat

- Archiving and keeping track of the current IEA correspondence and documents
- Preparation of Annual and Triennial IEA Reports
- Maintaining of the COUNCIL and IEAWORLD electronic listserves

REPORT

1. FUNCTIONING AS THE IEA SECRETARY

1.1. Facilitating the Executive Committee's plans and activities

1.1.1. Organization of the internal IEA meetings

Preparation of agenda, relating documents, and minutes from the meetings with the action lists, and providing logistics support for the meetings of the Executive Committee and the IEA Officers Summits. These included:

Executive Committee Meetings:

Cape Town, South Africa: September 6, 1998

Barcelona: February 12-13 , 1999

Santorini, Greece , August 30 , 1999

Summit Meeting of the Officers:

Rome, Italy : December 6-7, 1998

Ottawa, Canada : June 3-4, 1999

Council Meeting:

Santorini, Greece , September 2-3, 1999

1.2. Communication and support of the Executive Committee activities

Communication and support of various EC activities, including issues related to the following: revisions of the Draft IEA Strategic Plan, IEA Definitions in Ergonomics, various IEA policy issues, WWW home page revisions, the IEA History Book project, awards, IEA2000 Congress preparations, IEA/HES 1999 Symposium organization, and various policy and technical issues.

1.3. IEA Basic Documents

During the reporting period, an updated version of the IEA Basic Documents (July 1999) was prepared in cooperation with the Chair of the Policy and Development Committee, and published for the 1999 Council meeting.

1.4. IEA Roster

Electronic mailings of updated versions of the IEA Roster were prepared for distribution to the Executive, Council and Secretariats of the IEA members.

1.5. Current correspondence

Correspondence by letters, faxes and e-mail have been received and processed (often electronically) about a wide variety of subjects such as literature search, individual IEA membership, invitations to meetings, policy matters, relations with international organizations, etc.

2. NETWORKING WITH THE EC MEMBERS AND THE COUNCIL

2.1. Communication with the IEA Council and IEA Federated Societies

An electronic communication listserve (COUNCIL) is continually being updated to communicate with the Council members and secretariats of the IEA societies.

2.2. Communication with representatives of newly formed or developing societies, including:

- 1) Maggie Graf of the Swiss Society for Ergonomics (the inaugural meeting of this society was
- 2) Simon Yueng of the group that is forming new ergonomics society in Hong Kong (apparently with the support of the Chinese Ergonomics Society).

2.3. Communication with individuals interested in forming new societies, including from Argentina,

Romania

2.4. Mexico: Sociedad de Ergonomia y Factores de Humanos de Mexico (SEFHM)

The SEFHM has provided names of the current officers:

President Dr. Jesus Virchez Alanis
Executive Director: Dr. Enrique Bonilla Rodriguez,

but despite several communication attempts, no additional information about the society activities was received. From the past communications it is clear that SEFHM has not been able to reorganize itself, and does not have funds to operate. The payment of their dues was not received.

2.5. Applications for the IEA Federated membership

In the reporting period, there no new applications were received.

2.6. ESDA withdrawal form IEA

Dr. O. Hokwerda, Secretary of the European Society of Dental Ergonomics informed us about their intention to withdraw from the affiliation with IEA, with justification that individual membership of their members (presumably through the national ergonomics societies) makes more sense to them. Ian Noy encouraged them to reconsider their position.

2.7. Organizers of the IEA 2003 Congress in Korea

Successfully negotiated on behalf of the EC with Prof. M. Chung the issue of venue change to Seoul.

2.8. Federation of European Ergonomics Societies/FEES

No progress (see Policy and Development)

2.9. IEA representation

In the reported period, SG presented Welcoming Remarks on behalf of IEA at the International Conference on Computer-Aided Ergonomics and Safety, May 19-21, 1999, Barcelona, Spain, sponsored by the IEA and Spanish Ergonomics Society.

2.10. Proposal for IEA 2006 Congress

Received and processed a proposal from the Nederlandse voor Ergonomie to organize the 2006 Congress in cooperation with the German and Belgian societies.

Also, discussed the possibility of another proposal from the Societa Italiana di Ergonomia (SIE) with Gabriella Caterina, the SIE President.

3. NETWORKING WITH OTHERS OUTSIDE THE IEA COMMUNITY

3.1. World Health Organization (WHO)

On the request of WHO, the SG in collaboration with Chair of the Policy and Development Committee has submitted a report on the past EA activities. During its recent session, the WHO has extended the NGO status to IEA. A specific plan for future cooperation through the regional WHO offices needs to be developed, as required by WHO.

3.2. Communication with ICOH

The International Commission on Occupational Health (ICOH) has appointed Dr. Barbara McPhee as the liaison to IEA. Discussion with Dr. McPhee in late Fall of 1998 lead to great understanding of the ICOH policies and interests in supporting the IEA activities worldwide, especially in the area of occupational accidents prevention and health. As the IEA liaison, the SG will continue this dialog. It is also indented to invite ICOH to participate in the IEA 2000 Congress.

3.3. Status of MOUs

Current agreements and MOU's include: ISSC, IAAP, ICOH, ICSID, Liberty Mutual Insurance Co. These are being incorporated into the Rules, brochures, website, etc, need to keep track of these (on going activity).

3.4. Participation in the CREE meeting

The SG participated as guest in the CREE meeting held in Barcelona, Spain on May 22, 1999. The issue of CREE participation in the IEA2000 Congress was discussed.

3.5. Donations, Bequests

No donations or bequests were received in the reporting period by the S-G.

3.6. IEA input to IEHEE publication

The information about IEA and its activities, as well as information about the federated societies will be featured in the International Encyclopedia of Human Factors and Ergonomics to be published by Taylor & Francis in 2000.

4. MANAGING THE IEA SECRETARIAT

4.1. Archiving and keeping track of the IEA documents

This is an on going-activity. The potential location for the permanent archives is to be yet decided. Council members are invited to sent any suggestions to the SG.

4.2. Preparation of Annual and Triennial IEA Reports

The Annual (1998-1999) IEA Report was compiled and printed for the IEA Council meeting. The Annual Reports will be used to create the Triennial Report within 6 months after the change of the Presidency (every 3 years).

The COUNCIL and IEAWORLD electronic listserves are continually being updated

4.3. Staff

In the reporting period, Mrs. Laura Abell continued her secretarial service to IEA for about 4 hrs a week.

Waldemar Karwowski

July 1999

ANNUAL REPORT OF THE TREASURER

September 1998-August 1999

By Kazutaka Kogi

Including:

Financial Statements, 1998

Equity History

Schedule of Dues Received

NOTES TO 1998 FISCAL YEAR REPORT

Basis of Accounting

1. The IEA fiscal year-end is December 31.
2. The IEA's policy is to prepare its financial statements on the cash basis of accounting. Under this basis, revenues are recognized when received and expenses are recognized when paid.
3. The financial system comprises two parts; (i) annual operation, and (ii) special reserves.
 - i) The annual operations budget includes revenues from membership dues, capitation fees, interest and other receipts; and expenditures for administrative and other recurring activities.
 - ii) Special reserves include a loans reserve and special funds. These reserves are identified under the Equity heading of the Balance Sheet.

A loans reserve has been established to ensure an adequate supply of seed funds for conferences. The level of the reserve was set at US\$ 35,000. Presently, this sum is included in the IEA general accounts but is tracked and reported separately. Seed funds given in accordance with the IEA Policy on Support of Conferences are handled through this fund. Therefore, they are not reflected in the Statement of Operations. However, amounts receivable are shown as an asset on the Balance Sheet.

4. Advances to officers are treated as expended items in the Statement of Operations when paid. However, they are tracked separately.

SUMMARY OF FINANCIAL PERFORMANCE

1. The total revenue for the 1998 fiscal year amounted to US\$ 54,605. This comprised membership dues of US\$36,447. Capitation fees income was not available during the period.
2. The expenditures were mainly due to executive and administrative expenses and activities of committees. The total expenditures amounted to US\$51,724. The net surplus of operations for the year was \$2,881, with the cash reserve of \$53,997.
3. The current assets at the end of 1998 amounted to US\$ 128,011. The amount was reduced slightly due to the changes in the currency exchange rates, the major part of the term deposits being kept in Canadian dollars.
4. The IEA financial base is stable, albeit small. Since the income for covering operational activities have relied mainly on the membership dues and capitation fees, the financial situation was tight for the period. Traditional and new sources of revenues need to be explored to permit undertaking larger program initiatives.

5. The Liberty Mutual Fund has increased by the continued contribution of the Liberty Mutual. The initial operation of the Liberty Mutual Prize started in 1998. The HFAC/ACE Fund was closed and the residual small amount was transferred to the HFES Fund for ergonomics in developing countries.

Treasurer's Operational Schedule and Milestones

Budget approved by Executive Committee at mid-year meeting	January
Dues notice to societies	Jan 15
Reminder of dues outstanding	May 31
Preparation of year-end report and financial statement	May 31
Preparation of mid-year report for Council meeting	~Jun 30
Final reminder of outstanding dues	Oct 30
Call for budget estimates (deadline Nov 30)	Nov 1
Preparation of budget for mid-year meeting	Dec 31

**International Ergonomics Association
Balance Sheet
For Year Ended December 31, 1998**

(The Balance Sheet for Year ended December 31, 1998 is indicated in US dollars only.)

	1998	1997	1996
ASSETS			
Current assets			
Cash Accounts	35,961	38,550	14,214
Term Deposits		79,015	79,505
			81,022
Seed Funds Receivable		13,035	12,035
			34,035
Total	128,011	130,090	129,270
EQUITY			
ESA Fund for South East Asia		4,825	4,957
			7,699
HFES Fund for Erg. In IDCs		5,081	5,733
			4,275
SELF Fund	7,505	8,178	8,178
Loans Reserve	35,000	35,000	35,000
ACE Fund	-	119	18,193
Liberty Mutual Fund	21,603	5,000	-
Cash Reserve	53,997	61,102	55,925
Total	128,011	130,090	129,270

Prepared by Kazutaka Kogi 31/1/99

**International Ergonomics Association
Statement of Operations (in US Dollars)
For Year Ended December 31, 1998**

	1998	1997	1996	
REVENUE				
Membership Dues	36,447	40,541	38,895	
Capitation Fees	-	26,195	353	
Interest	2,853	153	4,059	
Contribution towards HFES Fund	-	-	1,459	439
Contribution: Liberty Mutual Fund	-	15,000	15,000	-
Miscellaneous	305	93	74	
Total	54,605	83,440	43,820	
EXPENDITURES				
Executive & Administrative Expenses				
Office-related expenses		3,547	11,370	3,193
Travel	9,275	9,238	10,022	
Clerical	4,400	1,095	2,240	
Committees				
Awards	8,997	5,165	-	
Policy and Development	1,678	4,954	1,915	
Task Force	-	3,522	-	
Science and Technology		3,913	2,367	2,290
Professional Practice and Training		5,295	6,521	5,575
Industrially Developing Countries		1,171	6,307	2,990
Promotions and Publication		1,488	2,402	2,840
Publications	2,288	2,318	1,485	
Newsletter	3,923	1,694	50	
Meeting costs	3,252	3,307	6,136	
Fees and bank charges		497	443	193
Grants	2,000	2,000	2,500	
Total	51,724	62,704	41,428	
OPERATING SURPLUS(DEFICIT)		2,881	20,735	2,392

Prepared by Kazutaka Kogi 31/1/99

**International Ergonomics Association
Statement of Changes in Reserves and Funds
As at December 31, 1998**

Cash Reserve (USD)	Credit	Debits	Balance
Balance at start of year			61,102
Operating surplus	2,881		
Gain/Loss due to USD exchange		4,371	
Transfer from Liberty Mutual Fund	1,997		
Transfer to Funds (interest)		1,354	
Transfer to Liberty Mutual Fund			15,000
Balance at end of period			53,997

Loans Reserve and Receivable (USD)	Credit	Debits	Balance
Balance at start of year (available)			22,965
Change in USD exchange		1,699	
ASEAN 97		2,301	
Global Ergonomics 98		5,000	
Balance at end of period (available)			21,965
Receivable ISE	2,000		
Receivable Brazil	1,035		
Receivable IEA2000		5,000	
Receivable Global Ergonomics 98	5,000		
Receivable			13,035
Value		35,000	

ESA Fund for South East Asia (USD)	Credit	Debits	Balance
Balance at start of year			4,957
Interest	198		
Change in USD exchange		330	
Balance at end of period			4,825
Receivable			
Value		4,825	

HFES Fund for Ergon. in IDCs (USD)	Credit	Debits	Balance
Balance at start of year			5,733
Interest		229	
Transfer from HFAC Fund		119	
Grants	1,000		
Balance at end of period			5,081
Receivable			

Value			5,081
-------	--	--	-------

SELF Fund (USD)	Credit	Debits	Balance
Balance at start of year			8,178
Interest		327	
Grants		1,000	
Balance at end of period			7,505
Receivable			
Value			7,505

ACE Fund (USD)	Credit	Debits	Balance
Balance at start of year			119
Transfer to HFES Fun			119
Balance at end of period			0
Receivable			
Value			0

Liberty Mutual Fund (USD)	Credit	Debits	Balance
Balance at start of year			15,000
Interest		600	
Liberty Mutual contribution	15,000		
1998 Awards		7,000	
Administration		1,997	
Balance at end of period			21,603
Receivable			
Value			21,603

1. Introduction

Since last August 1998, the Policy and Development Cee. (Koningsveld / Wilson / Zink / Rookmaaker) has developed a wide variety of activities which are partly an ongoing process, partly finished with the Council 1999 meeting.

All of them were and / or are agenda-items for Council and EC. For that reason this report will mostly refer to them in short terms.

2. IEA Strategic Plan

In Cape Town version 3.0 was discussed in 3 subgroups during the Council meeting. People reacted very positively to this approach. Comments were subject for changes in the 3.0 version. This 4.0 version was discussed once again in the E.C. and open for reactions by the IEA Community (IEA website). The actual 5.0 version is now the basis for the implementation into action items. Therefor all strategies from the plan are allocated to officers and / or Standing Cees. They are invited to present at Council 1999 their action-plans together with priorities and time frame.

3. IEA Basic Document

3.1 Election of Officers

Due to the somewhat unsatisfactory election process in Tampere an amended procedure (article 11) for the election of officers has been prepared for Council discussion and voting. It is expected that the forthcoming election in 2000 will be handled according this procedure.

3.2 Selection Triennial Congress Host

In this year a checklist for the host selection was prepared including all criteria which should be taken into account in the preparation by the ad-hoc selection task force and afterwards at the decision by Council, in order to make a proper weighting between various candidates.

3.3 Rule-change proposal

In order to support especially recently founded ergonomics societies (not yet IEA-member) we have prepared a proposal for Rule-change in article 6 / Qualification for Membership.

3.4 Endorsement-policies

Three policies regarding endorsement procedures were prepared by the Pol & Development Cee.:

3.4.1 Conferences

The existing policy in the IEA Basic Documents was revised, due to changes in some parts of the article, requested and voted by Council in the past.

3.4.2 Documents

The endorsement policy for (technical) documents prepared either by Standing Committees or by someone else is described as draft and subject for voting by Council.

3.4.3 Journals

A proposal for the endorsement-procedure of ergonomical related journals is elaborated and open for discussion and approval.

4. Survey-update

Because of the decision for an update of the actual Special Survey of Federated Societies, a questionnaire is prepared consisting of 3 parts:

Part 1 comprises factual data;

Part 2 comprises questions about main activities of the member societies and also plans of the future;

Part 3 comprises questions about ergonomics in society.

Part 1 should be collected by July 1, 1999.

Part 2 and 3 by January 1, 2000.

The updated special Survey will be presented at the 2000 Triennial Congress.

5. Sustaining Members

A campaign was launched in order to raise the number of Sustaining Members. Candidate-Sustaining Members were selected and submitted to the local IEA federated society for approval and support. The campaign will be continued.

Election of IEA Officers

3.1. GR

This item consists of several sub-items:

1. An introduction
2. Proposal for the revised Article 11 / IEA Basic Rules (election procedures)
3. Nomination Form for IEA Executive Office Candidate Officer Form (Parts A and B).
4. Voting items for the Council

1. The election of IEA Officers

1.1 Introduction

Following the Report by P&D Committee at the Cape Town Council meeting 1998, the Committee has proposed the following changes in the procedures for elections of the IEA officers.

1.2 Current election procedure

See IEA Basic Documents under item 11 / page 15-16 (ed. September 1998)

2. Proposal for revised Article 11 / IEA Basic Rules (election procedures)

11. Election of officers

1) At least nine months prior to the Triennial Congress, the Secretary-General will invite all Federated societies to make formal (written) nominations (see #3) for the IEA Executive Officers to be received within 60 days of the Council meeting. This invitation will be sent to all Council members and the secretaries of the Federated societies. The Federated Societies nominating candidates must first determine their ability, availability and willingness to serve and attend the IEA meetings as necessary.

2) To be eligible for office, candidates must be members of a Federated Society and have either served previously on the Council or are the current representatives. Candidates should have demonstrated service to IEA and continuity of attendance at Council meetings. In addition, candidates for President shall normally have served a term on the Executive Committee, including as an ex-officio member.

3) The prescribed nomination form, consisting of two parts (A: Nomination Form; B: Candidate Statement) must be used for making a nomination and submitted to the Secretary General within 60 days of the Council meeting.

4) Six weeks prior to the Triennial Congress, the Secretary General shall inform Council members and Secretaries of Federated Societies of all nominations received.

- 5) Further nominations from the representatives of the Federated Societies may be made at the Council meeting prior to the elections, upon submission of the completed Nomination Form for IEA Executive Office.
- 6) Before voting for the particular office, all candidates for that office will be excused. Each candidate will then be called in a random order to make a presentation regarding his/her goals and suitability for the office (maximum time of 10 minutes will be allowed), and to answer questions from the Council. After presentation the candidate will be excused, and the next candidate will be called upon.
- 7) Voting shall be by secret ballot. Candidates for a given office must not be present during the vote for that office. Voting Council members may vote only for one eligible candidate. Election is decided by simple majority. In the event that a simple majority is not achieved, the candidate with the least votes shall be removed from the slate, and voting shall continue.
- 8) Officers shall be elected in the order provided below, unless Council votes to alter this order prior to the elections:
 - a. President
 - b. Secretary-General
 - c. Treasurer
- 9) After the election of an officer, the President may call for a short break in order to provide an opportunity for further nominations.
- 10) The IEA President is responsible for the entire election process, and must assure that the election is conducted according to these procedures. The President must control the number of eligible votes. The President can be supported in this task by ex-officio non-voting members.

1. Introduction

In past years Council has discussed and approved changes in the IEA Policy on the Support of Conferences in Ergonomics.

In the new article about the IEA Policy etc. all those comments and changes are incorporated (enclosed).

1. Descriptive remarks

It is the policy of the IEA to support international scientific conferences organized by any of its Federated Societies or by other international bodies that have an interest in ergonomics or that are organizing a conference with a major ergonomics team. Support will be given for conferences of five major types:

(1) IEA Triennial Congress

(2) IEA Conference

(3) Joint Conference

(4) Approved Conference

(5) Conference Endorsement

The IEA Triennial Congress is organized and hosted by a Federated Society. The other four types of conferences will normally be organized by a Federated Society, IEA Technical Group, or by Societies representing the IEA in cooperation with other bodies as may be appropriate.

The IEA supports these conferences to varying degrees, depending upon the type, in three basic categories:

(1) Providing "seed" funds as approved by the Council

(2) providing publicity through its member societies (also see note below)

(3) By permitting the use of its name and logo to endorse the conference.

The IEA requires to receive eleven (11) copies of the conference proceedings, delivered to the Secretary General's address or to addresses designated by the Secretary General. This requirement applies to all types of IEA supported conferences (see table below). One copy will be retained by the IEA for archival purposes and the other ten copies will be distributed to industrially developing countries.

Level of Support

Conference Type	Seed			Capitation
	Funds	Publicity	Endorsement	Fees
Triennial Congress	X	X	X	40 Swiss Francs
IEA Conference	X	X	X	20 Swiss Francs
Joint Conference	X	X	X	15 Swiss Francs
Approved Conference		X	X	10 Swiss Francs
Conference Endorsement			X	0

2. Finances / Capitation Fee / Surplus

It should be noted that no monetary remuneration or salary is to be afforded any individual involved in the organization and management of any type of IEA supported conference except for reimbursement of actual expenses incurred in performing the duties and activities of organizing and/or managing the conference. This requirement does not apply, of course, to compensation for the services of a professional meeting organizer if one is utilized.

2.1 Capitation Fee

For all types of conferences except "Conference Endorsement", the IEA expects to derive some financial benefit from its support. This normally takes the form of a capitation fee and a pro-rated fee per part-time registrant, payable in Swiss Francs. The table indicates the level of support offered and capitation schedule for each conference.

To avoid excessive financial burden to conference organizers, the number of registrants to be used for assessing the capitation fee should be the sum of the number of delegates on each day divided by the number of days of the conference. Thus, for a four day conference, four delegates attending one day would be counted as one full delegate subject to a capitation fee.

Where the capitation fees constitute a significant concern to the applicant society or conference organizer, the capitation fees may be replaced by an alternative scheme to be negotiated on an individual basis. This will require a careful analysis of the conference budget. Alternative arrangements should provide a similar financial return to the IEA as the capitation fees.

The Executive Committee may waive, at its discretion- the capitation fees for conferences held in industrially developing countries or for delegates from industrially developing countries. Application for waivers will be considered for each conference on an individual basis.

In case of financial loss, capitation fees will be forgiven.

2.2 Surplus

It is recommended that all of the surplus (money remaining after capitation fees and all other obligations have been met), or a minimum of 50% of the surplus, be donated to the IEA for the purpose of

establishing an IEA fund in the name of the host society. The terms and conditions of the Fund shall be defined by the host society.

3. Promotion

The IEA will help promote IEA supported conferences (except Conference Endorsement) through the following means;

- IEA will provide a package including checklists for organizing conferences and the IEA logo for use in promotional material
- Scientific support from the IEA technical groups to organize sessions and promote subject area, if requested.
- Listing the conference in IEA home page and providing a link, if available and appropriate
- Advertizing the conference in the IEA newsletter, *Ergonomics International*
- Requesting IEA approved journals to advertize the conference, if appropriate

Federated Societies agree to help promote all IEA supported conferences (except Conference Endorsement) through the following means;

- listing of the conference in the calendar section of their newsletter
- including a description or call for participation in their newsletter
- distributing promotional material such as call for papers and announcements to its members (or at their annual conference).

The organisers of IEA supported conferences are requested to provide exhibit space to the IEA at a prominent location at the conference site for the duration of the conference for the purpose of displaying IEA leaflets, printed or published materials, conference calendars and other promotional displays.

4. Procedure for IEA Conference Endorsement / Meeting request forms

For all types of conference endorsement the organizers should submit the relevant IEA Request Form.

Forms for IEA Triennial Congress are available from the Secretary General. Forms for the other types of conferences are available from the Chair of the Science and Technology Committee or may be downloaded from the IEA home page. The chair Sc & T Cee takes care.

For IEA congresses, IEA conferences and Joint Conferences the IEA requires that comprehensive financial reports be completed and filed with the Treasurer of IEA within 4 months after the conference. For Approved Conferences, a report shall be submitted to the Treasurer of IEA indicating the final attendance details.

Any financial return to IEA shall be provided with these reports.

0. Introduction

As a matter of policy, the IEA refrains from endorsing technical documents. However, from time to time there may be a need to provide IEA endorsement of various documents developed either within or outside of the IEA committees and sub-committees.

There are three basic categories of documents that may be considered for IEA endorsement:

1. Category 1:

Technical documents prepared by Technical Committees of the Science and Technology Committee.

2. Category 2:

Documents developed by sub-committees of other IEA Standing Committees.

3. Category 3:

Other types of documents.

For each category of documents the specific procedure for endorsement is set out below.

1. Procedure for endorsement of technical documents prepared by Technical Committees of the Science and Technology Committee (Category 1 documents).

Step 1.1:

Draft document to be reviewed by the appropriate Technical Committee.

Step 1.2:

The draft document to be reviewed by the Chair of Science & Technology Committee and sent for external review (and to interested Council members) at the discretion of the S&T Chair

Step 1.3:

The document proposed for endorsement will be submitted to EC for final approval

The IEA endorsed document should have the following wording on its front cover:

This document has been developed by (*provide name of the respective subcommittee*) and reviewed by the Science and Technology Committee of IEA.

The views expressed in this document are those of the authors and do not necessarily reflect the views of IEA. IEA disclaims any liability as to the intended or non-intended use of this document. Specific

mention of any products, equipment, procedures or systems is not intended to imply the IEA endorsement of the same.

2. Procedure for endorsement of other type of technical documents

Step 2.1:

Draft-document is presented to the Executive Committee.

Step 2.2:

Draft-document goes through an external review process, to be coordinated by the Chair SC & T Cee.

Step 2.3:

The final document will be presented to Council by the Chair SC & T Cee (voting for endorsement).

This document should have the following wording on its front cover:

This document is developed by ... reviewed by external reviewers and approved by IEA Council on ... for distribution.

The views expressed in this document are those of the authors and do not necessarily reflect the views of IEA. IEA disclaims any liability as to the intended or non-intended use of this document. Specific mention of any products, equipment, procedures or systems is not intended to imply the IEA endorsement of the same.”

3. Procedure for endorsement of other IEA Standing Cees documents (other than Sc & T Cee).

Step 3.1:

Draft-documents have to be reviewed by the appropriate Sub-committee.

Step 3.2:

Draft-document has to be sent to the Chair of the appropriate Standing Committee for comment.

Step 3.3:

The final-document will be presented by the Chair of that particular Standing Committee to Council (voting for endorsement).

This document should have the following wording on its front cover:

This document is developed by ... and reviewed by the ... IEA Standing Committee; endorsed by IEA Council on ...

The views expressed in this document are those of the authors and do not necessarily reflect the views of IEA. IEA disclaims any liability as to the intended or non-intended use of this document. Specific mention of any products, equipment, procedures or systems is not intended to imply the IEA endorsement of the same.”

4. Proposal for voting

1. Council agrees to the policy for document endorsements as presented under 1,2 and 3 above.
2. Council agrees to the wording under 1, 2 and 3 as presented above.

1. The actions on the PPE Committee following the 1998 Council meeting were to refine and more widely publicise the agreed documentation on Core Competencies and Certification, and to progress the actions on accreditation of educational programmes and the directory of education programmes.
2. Almost all the actions on the PPE Committee emanating from the Strategic Plan are to do with the activities in 1. above.
3. The documents on core competencies, minimum criteria for a certification programme and IEA endorsement of a certification process were issued to Council members for discussion amongst the Federated Societies during 1998-1999. Almost no comments have come back formally and directly. However, enough informal comment was received for me to not issue the documents to a wider audience, either in hard copy or via the IEA website, until a review had been carried out. This review, and the changes recommended as a result, is covered in attached documents PPE/1999/A1, A2, A3, A4 and A5. Recommended changes for approval of Council include the overall integration of the official documentation and also major and minor editing.
4. It is proposed that the three documents approved to date, in their amended form, be known collectively as Professional Recognition Documentation.
5. The Certification Endorsements Sub-Committee is chaired by Hal Hendrick. He has been reviewing how it will operate once the first hard case is presented. There may be some merit in carrying out a dry run on a hypothetical example, but given the pressures on time for his sub-committee members this might be neither fair nor feasible.
6. The Accreditation sub-committee under the Chair of Margaret Bullock has continued with its task of examining possible guidance on the accreditation of educational programmes in ergonomics. A verbal report will be presented to Council 1999, a preliminary draft proposal presented and agreed at the Executive meeting in Spring 2000 with a view to full discussion and debate at San Diego. In the meantime, the relationship of the Accreditation documentation to the others is shown in Figure 1 of document A2.
7. The Committee examining the register of approved ergonomics courses world wide has also been progressing under the Chair of Leon Straker.
8. Voting items. The following voting items are extracted from the attached documents:

Proposal A: That Council accept that the combined documentation on competencies, certification, accreditation and any additions be known collectively as the IEA Professional Recognition Documentation.

Proposal B: That Council accept the document A2 as a covering statement for the Professional Recognition Documentation.

Proposal C: That Council accept the revised versions of documents A3, A4 and A5.

Proposal D: That Council accepts all currently available formal documents be delivered to the Chair of the Publications Committee for incorporation onto the IEA web site either in HTML or else as FTP documents.

Report to IEA Executive and Council, Greece, September 1999

Attachments:

- A1 - Professional Recognition Documentation
- A2 - Documentation on Professional Recognition in Ergonomics:
Introduction to Scope and Intention
- A3 - Core Competencies in Ergonomics
- A4 - Minimum Criteria for the process of Certification of an Ergonomist
- A5 - Guidelines for Process of Endorsing a Certification Body
- A6 - Report on 4th Edition of Directory of Ergonomics Programs

Professional Practice and Education Committee

Documentation on Professional Recognition in Ergonomics: Introduction to Scope and Intention

A. Introduction

1. Five initiatives concerned with the professional recognition of ergonomists are being undertaken by the IEA as follows:

1. Core Competencies for Practitioners in Ergonomics [short name: Competencies]
 - Summary version
 - Full version
2. Minimum Criteria for the Process of Certification of an Ergonomist [short name: Certification Criteria]
3. Criteria for IEA Endorsement of Certifying Bodies [short name: Certification Endorsement]
4. Accreditation Procedures Guidelines for Ergonomics Education Programmes [short name: Accreditation]
5. Directory of Ergonomics Education Programmes [short name: Education Directory]

2. These initiatives were set up in response to requests for information and assistance from the Federated Societies. There have been requests for advice about: the education and recognition of professional ergonomists; methods of ensuring the quality of ergonomics education programmes; and the qualities which should characterise a 'professional ergonomist'. The diverse needs expressed have reflected the differing sizes, goals and levels of activity of the various Federated Societies, from Societies which want to support the establishment of first courses in ergonomics, through to others which want to protect the ergonomics profession from improper use of the term 'ergonomist' by unqualified individuals or groups.

3. Task forces were established to examine each of the five areas of concern; two of these task forces (Accreditation and Education Directory) are still operational and will report and make recommendations to the 2000 Council Meeting. Following wide discussion, papers containing guidelines for each of the other three activities were presented at the IEA Council meeting at Tampere in 1997, and during workshops held during the IEA Congress. The recommendations were disseminated to Federated Societies for their information and comment in August 1997. It was agreed that they were living documents and that regular updates would take place, to reflect changes in practice or views over time. Following responses from Societies, the guidelines were presented once more to IEA Council in September 1998, where they were accepted. Councillors for each Federated Society hold copies.

4. It must be emphasised that the IEA provides guidelines only, and use of these by Federated Societies is entirely voluntary. There is no attempt by the IEA to be prescriptive at an international level nor to dictate national activities. Documents such as the IEA core competencies and the criteria for accreditation of educational programs (planned for presentation in 2000) may be helpful for educational institutions, but are not obligatory requirements.

Figure 1 shows linkages between the different initiatives and their associated guideline documents ...

B. Competencies

5. The summary version and the full version of the IEA document 'Core Competencies for Practitioners in Ergonomics' have been accepted by IEA Council. These contain Units, Elements and Performance Criteria, produced after discussion and consultation at an international level. The Competencies document does not represent certification requirements for 'professional ergonomists', nor curriculum

requirements for educational programs, although Federated Societies or Institutions may find it useful as a resource for either.

6. The IEA recognises that any outline of competencies has a limited life and that regular review is important. Also, even as guidance, an outline of competencies must not be too prescriptive. The IEA anticipates that Societies will suggest amendments, deletions and additions and welcomes such contributions. The IEA plans to discuss any such suggestions at the next IEA Congress in 2000, where wide international input will provide background for modifications.

C. Certification Criteria

7. While some Federated Societies (or regional groupings) already have a process in place for the Certification of ergonomists, the IEA has received numerous requests for guidance from other Societies contemplating the introduction of Certification. Through the PPE Committee, the IEA has developed a set of minimum criteria relevant to the process of certification.

8. The IEA Guidelines are meant to be informative and to assist Societies in the development or review of their own process of certification, if they wish to have one. The IEA, which encourages the move towards certification, appreciates the need for flexibility. Presentation of a set of minimum criteria does not prevent countries, Societies or other bodies from developing other approaches or more stringent standards, but it does allow us to acknowledge, at an international level, that there is a minimum standard which all systems should meet. Criteria for the endorsement of a certifying body by the IEA have also been prepared for the guidance of those Societies establishing a Board or Committee to be responsible for a certification process.

9. These sets of criteria will evolve and further comments from Federated Societies will be welcomed for the IEA's discussion at its triennial review, due in 2000.

D. Certification Endorsement

10. Requests from Federated Societies for concrete assistance has led to the establishment of an IEA Certification Endorsement Sub-Committee chaired by Hal Hendrick. This is to review and, if appropriate, endorse certifying bodies and their individual systems of certification, according to the IEA Guidelines. The IEA's endorsement of a Society's (or other body's) system of certification would indicate that it had met the minimum criteria established internationally. The IEA Council approved the establishment of this Sub-committee and its terms of reference in 1997.

11. Submission of details of a certification process and certifying body for IEA endorsement is entirely voluntary.

E. Review of Guidelines

12. As suggestions are received from Federated Societies for modification to the IEA documentation on professional recognition, these are being collated. At the next formal review of the documents (IEA 2000), they will be incorporated, where appropriate, in proposed revisions. The IEA will continue to reflect a good international consensus in such matters of professional standing and recognition.

MINIMUM CRITERIA FOR THE PROCESS OF CERTIFICATION OF AN ERGONOMIST

4.1.GR

The IEA suggests that all Federated Societies establish or co-operate with a process of certification of ergonomists. The IEA offers the following guidelines for the process and the minimum criteria to be applied.

1. Process of evaluation of the applicant

1.1 Purpose

The purpose of evaluating the applicant is to ensure that they are competent to practise as an ergonomist and can demonstrate an appropriate standard of professional performance.

1.2 Reference standards

Expected standards of ergonomics practice should be defined clearly by the evaluating body, which itself should meet the requirements of CEN/CENELEC European standard 45013 and any relevant IEA criteria. The standards should relate to defined ergonomics competencies. Reference here could be made to the IEA Core Competencies in Ergonomics. Where certain competencies are required evidence should be sought that would demonstrate that the applicant possessed those core competencies or a defined subset of them appropriate to a specific area of expertise and practice.

1.3 Methods of evaluation of competencies

The certification process must apply a range of effective measures to determine the person's competence as an ergonomist. Competency in core areas of ergonomics may be demonstrated in a variety of ways. An acceptable and feasible combination should be used to ensure appropriate appraisal of core competencies, including but not limited by the following:

- Evidence of completion of an educational program in ergonomics which has successfully demonstrated its coverage and assessment of a set of core competencies (see below).
- Evidence of a defined period of substantial professional experience in ergonomics.
- Presentation of appropriate products, work samples or descriptions of work projects and evidence of their outcomes, to demonstrate specified relevant ergonomic competencies.
- Examination of selected core competencies, which should acknowledge the diverse background of applicants and their abilities to reach a level of competent ergonomics practice by a variety of means. Forms of examination may vary depending on the competencies being evaluated and could include written papers, oral interviews or practical tests.

1.4 Assessors

Evaluation of applications for certification should be carried out by qualified and multiple assessors and, for each form of evaluation, specified criteria should be applied. In order to establish a panel of such assessors in the first place, "grandfather" clauses could be put in place or else assistance sought from Federated Societies or other bodies which already have a certification process in place.

2. Minimum criteria to be satisfied by the applicant

2.1 Educational Qualifications

A number of routes to educational qualifications might be acceptable.

2.1.1. Ergonomics qualification from a tertiary (university level) institution. (It is anticipated that, in due course, the educational program would be accredited according to national standards, developed by the relevant Federated Society).

- i. Tertiary (undergraduate) qualification in ergonomics of a minimum of three years duration, which has included comprehensive preparation in ergonomics competencies.

ii. Tertiary (postgraduate) qualification in ergonomics of a minimum of one year duration, following prior completion of a tertiary (university level) educational program in a relevant specialist field (involving a minimum of three years education).

OR

2.1.2 Tertiary (university level) qualification in a related field of a minimum duration of four years, which has included a major component of ergonomics, has addressed a comprehensive set of core competencies and has required completion of a major ergonomics project.

OR

2.1.3 Tertiary (university level) qualification in a related field of a minimum duration of three years, followed by continuing education (CE) programs to ensure comprehensive preparation in ergonomics competencies and substantial experience in the practice of ergonomics. Evaluation of applicants in this category must be designed to ensure that ergonomics competencies can be demonstrated and a variety of evaluative methods should be used for this purpose. If a formal examination is not offered, then other methods such as oral interview, preparation of written essays or examples of work should be required.

2.1.4 Notes:

i. "Related area" or 'relevant specialist field' may be in any professional field that prepares the student in a substantial set of the core competencies.

ii. Ergonomics competencies which are deemed as necessary and which are not achieved through formal education, should be developed specifically during post-qualification experience and appropriate evidence should be sought to confirm this.

iii. It is preferable that the educational program should include appropriate periods of ergonomics practice, supervised and validated by a qualified educationalist and/or a practising ergonomist to achieve competency in specified core areas. Where this has not occurred, evidence of access to a mentor or supervisor during initial periods of professional practice (for example, for no less than two years) should be sought.

2.2 *Post-qualification experience in ergonomics practice*

2.2.1 Post-qualification experience may include working as an ergonomics practitioner, educating others about ergonomics or carrying out ergonomics research, where ergonomics practice forms part of the person's total activity.

2.2.2 Where supervised training in ergonomics has not occurred during the educational program, the initial two year period of practice should include opportunities for the ergonomist to seek advice from experienced practitioners.

2.2.3 The outcome of post-qualification experience should be achievement of competencies in defined core areas to complement those obtained through education.

3. **Recertification**

The IEA recommends that certification be provided for a finite period (for example five years) and that a suitable process for recertification be defined by the certifying body, in which the applicant must demonstrate their continuing work in ergonomics.

4. **Code of Conduct**

The IEA recommends that a Code of Conduct for professional ergonomists be applied to those who receive certification. The IEA has established guidelines for a Code of Conduct.

1. Any mature discipline and profession requires understanding of its core competencies. Also, the exercise of defining core competencies is itself well worth while, because it prompts a profession to look closely at itself, its goals and its perceived contribution to society. Once complete, it provides a record of standards by which the profession can ensure quality of performance.
2. Competency standards do not themselves represent an outline of certification requirements, although they may be a resource for the certification process. Nor do they represent a curriculum document, although they may help direct the development of a curriculum.

3. DEFINITION OF COMPETENCY

A competency is a combination of attributes underlying some aspect of successful professional performance. An outline of core ergonomics competencies should describe what it is that ergonomists are able to do in practice.

4. TERMS

Ergonomics competency standards have been developed in terms of Units, Elements and Performance Criteria, which is the accepted format.

Units of Competency reflect the significant major functions of the profession or occupation.

Elements of Competency describe the identifiable components of ergonomics performance which contribute to and build a unit of competency.

Performance Criteria describe the standards expected of performance in the ergonomist's work. Expressed in terms of outcomes and professional ergonomics performance, they provide the basis on which an expert assessor could judge whether the performance of the ergonomist reached the standard acceptable for professional practice.

5. SCOPE OF ERGONOMICS

The scope of ergonomics is broad, across many domains. Ergonomists can be involved in both pro-active and retrospective problem solving. The contexts for ergonomics practice are diverse and ergonomics must relate to the workplace, transport, the home or to leisure activities, or to the use of a variety of products. The IEA Core Competencies must acknowledge this diversity and should be interpreted with this breadth of scope in mind.

6. USES OF CORE COMPETENCIES

Ergonomics core competencies could be used in a variety of ways. These include:

- the development or review of curricula in ergonomics;
- the accreditation of new and existing ergonomics educational programs;
- the development of comprehensive and equitable assessment processes for the evaluation of a person's professional competence;
- the recognition by ergonomics certification authorities of the competency of graduates holding qualifications in ergonomics conferred by recognised institutions;
- the assessment of competence of eligible overseas qualified ergonomists seeking to practise in another country;
- the assessment of eligible ergonomists who have not practised for a defined period of time and who are seeking to re-enter the profession or to be re-certified;
- the development of continuing education programs offered by the Federated Societies;
- the determination of need for continuing professional education by employers
- the preparation of public information defining ergonomics roles and responsibilities.

7. BENEFITS OF NATIONAL (AND INTERNATIONAL) COMPETENCY STANDARDS

Those who have been involved with the application of Competency Standards have found them of benefit in the following ways:

- national consistency
- chance to examine the profession and its scope
- better definition of the profession
- basis for communication at a national (and international) level
- a resource for education establishments and curricula
- provision of a more equitable basis for certification
- quality assurance

8. REVIEW OF COMPETENCY STANDARDS

Any set of competencies has a limited life and this IEA document will be reviewed on a regular basis.

9. PRESENTATION

The core competencies have been presented in two formats "Summary" and "Full"

The **Summary** version presents the units and elements of ergonomics competency as a summary, for those who require a concise overview. It is expected that any assessment of an individual or programme would benchmark against this summary.

The **Full version** presents a complete set of Units, Elements and Performance Criteria to illustrate the standards of performance required. This Full version would be used to illustrate and give more detail on examples of, and criteria for, professional performance against which judgement can be made.

Version 2, May 1999, PPE Committee

SUMMARY OF CORE COMPETENCIES IN ERGONOMICS

UNITS AND ELEMENTS OF COMPETENCY

Unit 1. Investigates and analyses the demands for ergonomics design to ensure appropriate interaction between work, product or environment and human capacities and limitations

- 1.1 Understands the theoretical bases for ergonomics planning and review.*
- 1.2 Applies a systems approach to analysis.*
- 1.3 Understands the requirements for safety, the concepts of risk, risk assessment and risk management.*
- 1.4 Understands and can cope with the diversity of factors influencing human performance and quality of life, and their inter-relationships.*
- 1.5 Demonstrates an understanding of methods of measurement and interpretation relevant to ergonomics appraisal and design.*
- 1.6 Recognises the extent and limitations to own professional competence*

Unit 2. Analyses and interprets findings o ergonomics investigations

- 2.1 Evaluates products or work situations in relation to expectations for safe and effective performance.*
- 2.2 Appreciates the effect of factors influencing health and human performance.*
- 2.3 Analyses and interprets research data accurately and without bias, consulting appropriately where required.*
- 2.4 Understand relevant current guidelines, standards and legislation.*
- 2.5 Makes and can justify decisions regarding relevant criteria which would influence a new design or a solution to a specified problem.*

Unit 3. Documents ergonomics findings appropriately.

- 3.1 Provides a succinct report in terms understandable by the client and appropriate to the project or problem.*
- 3.2 Communicates clearly to the relevant workforce or general public, and if feasible to the scientific community.*

Unit 4. Determines the compatibility of human capacity with planned or existing demands.

- 4.1 Appreciates the extent of human variability influencing design.*
- 4.2 Determines the quality of match and the interaction between a person's characteristics, abilities, capacities and motivation, and the organisation, the planned or existing environment, the products used, equipment, work systems, machines and tasks.*
- 4.3 Identifies potential or existing high risk areas and high risk tasks, where risk is to health and safety of the individual completing the task or any others affected.*
- 4.4 Determines whether the source of a problem is amenable to ergonomics intervention.*

4.5 *Justifies decisions on ergonomics interventions or implementations.*

Unit 5. Develops a plan for ergonomic design or intervention

5.1 *Adopts a holistic view of ergonomics.*

5.2 *Incorporates approaches which would improve quality of life as well as performance.*

5.3 *Develops strategies to introduce a new design*

5.4 *Considers alternatives for improvement of the match between the person and the product, the task or the environment.*

5.5 *Develops a balanced plan for risk control, with understanding of prioritisation and costs and benefits involved.*

5.6 *Communicates effectively with the client, any stakeholders, the public and professional colleagues.*

Unit 6. Makes appropriate recommendations for ergonomics changes

6.1 *Makes and justifies appropriate recommendations for design-based changes*

6.2 *Makes and justifies appropriate recommendations for organisational planning-based changes*

6.3 *Makes and justifies appropriate recommendations for personnel selection, education and training*

Unit 7. Implements recommendations to improve human performance

7.1 *Relates effectively to clients and all stakeholders, at all levels of personnel.*

7.2 *Supervises the application of the ergonomics plan.*

7.3 *Manages change effectively and sympathetically*

Unit 8. Evaluates outcome of implementing ergonomics recommendations

8.1 *Monitors effectively the results of ergonomics change implementation*

8.2 *Carries out evaluative research relevant to ergonomics*

8.3 *Makes sound judgements on the quality and effectiveness of ergonomics change implementation*

8.4 *Modifies a design or program in accordance with the results of evaluation, where necessary.*

8.5 *Understands the principles of cost-benefit analysis for any ergonomics change.*

Unit 9. Demonstrates professional behaviour

9.1 *Shows a commitment to ethical practice and high standards of performance and acts in accordance with legal requirements.*

9.2 *Recognises personal and professional strengths and limitations and acknowledges the abilities of others.*

9.3 *Maintains up -to- date knowledge of national strategies and scientific state of the art, relevant to ergonomics practice.*

9.4 Recognises the impact of ergonomics on people's lives.

Version 1, 1998, PPE Committee

CORE COMPETENCIES IN ERGONOMICS : FULL OUTLINE

Units, elements, and performance criteria

Unit 1. Investigates and assesses the demands for ergonomic design to ensure the optimal interaction between work, product or environment and human capacities and limitations

Element 1.1 Understands the theoretical bases for ergonomic planning and review of the workplace.

Performance Criteria

1.1a Understands theoretical concepts and principles of physical and biological sciences relevant to ergonomics.

- i. Demonstrates a working knowledge of physics, chemistry, mathematics, anatomy, functional anatomy, physiology, pathophysiology, exercise physiology and environmental science as they apply to ergonomics practice.
- ii. Can apply knowledge of biomechanics, anthropometry, motor control, energy, forces applied as they relate to stresses and strains produced in the human body.
- iii. Demonstrates an understanding of the pathology relating to environmentally or occupationally generated disorders or causes of human failure.

1.1b Understands the effects of the environment (acoustic, thermal, visual, vibration) on human health and performance.

1.1c Understands theoretical concepts and principles of social and behavioural sciences relevant to ergonomics.

- i. Demonstrates a working knowledge of sensory, cognitive and behavioural psychology and sociology, and recognises psychological characteristics and responses and how these affect health, human performance and attitudes.
- ii. Can apply knowledge of information intake, information handling and decision making; sensory motor skills, human development and motivation principles as they relate to human performance.
- iii. Understands the principles of group functioning and socio-technical systems.

1.1d Understands basic engineering concepts, with a focus on design solutions.

- i) Demonstrates an understanding of design and operation of technologies in which they work.
- ii) Appreciates hardware design problems.
- iii) Understands and can apply the basics of industrial safety

1.1e Understands and can apply the basics of experimental design and statistics.

1.1f Understands the principles of organisational management.

- i) Demonstrates an understanding of individual and organisational change techniques, including training, work structuring and motivational strategies.

1.1g Demonstrates an understanding of the principles of ergonomics and human-machine interface technology.

Element 1.2 Applies a systems approach to analysis.

Performance Criteria

1.2a Demonstrates a knowledge of the principles of systems theory and systems design and their application to ergonomics.

1.2b Demonstrates a knowledge of the principles of ergonomics analysis and planning in a variety of contexts, and the scope of information required to ensure quality of life.

1.2c Understands the determinants and organisation of a person's activities in the field and plans the analysis according to the organisation's strategy and purposes.

1.2d Can explain the scientific or empirical rationale for appraisals selected and has the expertise required to perform them.

1.2e Identifies the demands of the situation and accesses sources of appropriate information.

1.2f Develops action plans with those involved and identifies the critical factors of the ergonomic analysis.

1.2g Carries out a systematic, efficient and goal orientated review of demands appropriate to ergonomics, addressing the needs of the project.

Element 1.3 Understands the requirements for safety, the concepts of risk, risk assessment and risk management.

Performance Criteria

1.3a Recognises the importance of safety principles, guidelines and legislation in risk management

1.3b Understands the goals of risk management.

i) Demonstrates ability to manage change.

ii) Understands how to gain commitment of management and participation of worker in risk management approaches.

Element 1.4 Understands and can cope with the diversity of factors influencing human performance and quality of life and their inter- relationships.

Performance Criteria

1.4a Understands the organisational, physical, psycho-social and environmental factors which could influence human performance, an activity, a task, or use of a product and knows how to cope with adverse conditions.

1.4b Understands the impact of individual factors on other possible factors and the implications for ergonomic assessment.

1.4c Recognises those aspects of the environment that are flexible and changeable.

Element 1.5 Demonstrates an understanding of methods of measurement relevant to ergonomic appraisal and design.

1.5a Understands the type of quantitative and qualitative data required to clarify the basis for ergonomic appraisal and design, and validates the measurements selected for data collection and/or application.

- 1.5b Demonstrates the ability to carry out appropriate surveillance of the nature and magnitude of risks.
- 1.5c Selects the appropriate form of measurement for the particular context.
- 1.5d Applies measurement procedures and uses measurement instruments effectively, or refers appropriately to other ergonomics team members, to quantify load on the person and human characteristics.
- 1.5e Understands the concepts and principles of computer modelling and simulation.
- 1.5f Understands the use of the computer for data acquisition, analysis and design development.

Element 1.6 Recognises the scope of personal ability for ergonomic analysis

- 1.6a Appreciates when it is necessary to consult and collaborate with a person with different professional skills to ensure comprehensive measurement taking and analysis.

Unit 2. Analyses and interprets findings of ergonomics investigations

Element 2.1 Evaluates products or work situations in relation to expectations for error-free performance.

Performance Criteria

- 2.1a Determines the demands placed on people by tools, machines, jobs and environments.
- 2.1b Evaluates user needs for safety efficiency, reliability and durability, and ease of use of products and equipment and how these are met.

Element 2.2 Appreciates the effect of factors influencing health and human performance.

Performance Criteria

- 2.2a Has a basic understanding of the mechanisms by which work or prolonged exposure to environmental hazards may affect human performance or be manifested in injury, disorder or disease.
- 2.2b Defines efficiency, safety, health and comfort criteria.
- 2.2c Specifies the indicators of poor match between people and their tools, machines, jobs and environments.

Element 2.3 Consults appropriately regarding analysis and interpretation of research data.

Element 2.4 Analyses current Guidelines, Standards and legislation, regarding the variables influencing the activity.

Performance Criteria

- 2.4a Refers to and applies relevant scientific literature and national and international recommendations and standards appropriate to the project.
- 2.4b Matches measurements against identified Standards.

Element 2.5 *Makes justifiable decisions regarding relevant criteria which would influence a new design or a solution to a specified problem.*

Unit 3. Documents ergonomic findings appropriately.

Element 3.1 *Provides a succinct report in terms understandable by the client and appropriate to the project or problem.*

Unit 4. Determines the compatibility of human capacity and planned or existing demands.

Element 4.1 *Appreciates the extent of human variability influencing design.*

Performance Criteria

4.1a Understands the influence of such factors as a user's body size, skill, cognitive abilities, age, sensory capacity, general health and experience on design features.

Element 4.2 *Determines the match and the interaction between a person's characteristics, abilities, capacities and motivations, and the organisation, the planned or existing environment, the products used, equipment, work systems, machines and tasks.*

Element 4.3 *Identifies potential or existing high risk areas and high risk tasks.*

Element 4.4 *Determines whether the source of a problem is amenable to ergonomic intervention.*

Unit 5. Develops a plan for ergonomic design or intervention.

Element 5.1 *Adopts a holistic view of ergonomics in developing solutions*

Performance Criteria

5.1a Identifies the relative contribution of organisational, social, cognitive, perceptual, environmental, musculoskeletal or industrial factors to the total problem and develops solutions accordingly.

5.1b Considers the impact of legislation, codes of practice, Government Standards and industry-based standards on defined problems and possible solutions.

Element 5.2 *Incorporates approaches which would improve quality of life in the working environment*

Performance Criteria

5.2a Provides opportunities for self development.

5.2b Considers factors influencing the person's sense of satisfaction with the workplace.

Element 5.3 *Develops strategies to introduce a new design to achieve a healthy and safe work place.*

Performance Criteria

5.2a Understands the iterative nature of design development.

5.2b Recognises the practicalities and limitations of applying ergonomics, including the introduction of change.

5.2c Prepares a design specification report based on the systematic analysis to meet the objectives of the project, for use by industrial designers, engineers, computer scientists, systems analysts, architects or other professionals.

Element 5.4 Considers alternatives for optimisation of the match between the person and the product, the task or the environment and to achieve a good performance

Performance Criteria

5.3a Establishes appropriate short and long term goals relevant to the defined problems, in consultation with the client.

5.3b Considers the options available and the balance of approaches to be applied, relevant to the objectives.

5.3d Considers the potential benefits and costs of each form of ergonomic solution.

Element 5.5 Develops a balanced plan for risk control

Performance Criteria

5.4a Appreciates the background information required for effective risk management.

5.4b Understands how to control adverse physical and chemical conditions and major pollutants.

5.4c Establishes priorities in relation to level of risks identified, and to their consequences for health safety.

5.4d Selects appropriate forms of risk control, based on theoretical knowledge and ergonomics practice and develops a comprehensive, integrated and prioritised approach for realistic risk control.

5.4e Identifies where assistive devices and aids could enhance compatibility between the person and the environment.

5.4f Considers the needs of special groups (eg. ageing or disabled).

Element 5.6 Communicates effectively with the client and professional colleagues.

Performance Criteria

5.5a Discusses with the client, users and management the design or intervention strategies available, their rationale, realistic expectations of outcome, limitations to achieving outcome, and the costs of the proposed ergonomics plan.

5.5b Establishes effective relationships and collaborates effectively with professional colleagues in other disciplines in the development of ergonomic design solutions.

Unit 6. Makes appropriate recommendations for ergonomic design or intervention.

Element 6.1 Understands the hierarchies of control systems

6.1a Recognises the safety hierarchy, application of primary and secondary controls and the order of introducing controls.

Element 6.2 Outlines appropriate recommendations for design or intervention

Performance Criteria

6.2a Utilises the systems approach to human-workplace integrated design for new or modified systems and understands design methodology and its use in systems development.

6.2b Applies correct design principles to design of products, job aids, controls, displays, instrumentation and other aspects of the workplace, work and activities and considers human factors in the design of any utility.

6.2c Drafts systems concepts for a functional interaction of tasks/technological variants, work means/tools, work objects/materials, work places/work stations and the work environment.

6.2d Develops appropriate simulations to optimise and validate recommendations.

6.2e Outlines details of the appropriate concept and develops specific solutions for testing under realistic conditions.

6.2f Provides design specifications and guidelines for technological, organisational and ergonomic design or redesign of the work process, the activity and the environment which match the findings of ergonomic analysis.

6.2g Is able to justify recommendations.

Element 6.3 Outlines appropriate recommendations for organisational management

Performance Criteria

6.3a Understands the principles of total quality management.

6.3b Recognises the need to design organisations for effective and efficient performance and good quality of work place.

6.3c Recommends changes to the organisational design appropriate to the problem identified.

6.3d Considers issues such as participation, role analysis, career development, autonomy, feedback and task redesign as appropriate to the client and defined problem.

Element 6.4 Makes recommendations regarding personnel selection

Performance Criteria

6.4a Recommends personnel selection where appropriate as part of a balanced solution to the defined problem.

6.4a Applies appropriate criteria for personnel selection, where relevant, according to the nature of the demands.

Element 6.5 Develops appropriate recommendations for education and training in relation to ergonomic principles.

Performance Criteria

6.5a Understands current concepts of education and training relevant to application of ergonomic principles, including encouragement of learning.

6.5b Implements effective education programs relevant to understanding the introduction of ergonomic measures or to the control of potential risks in the workplace, home, public or leisure environments, and to achieve safe and comfortable and successful performance and productive output in new and/or changed activities.

Unit 7. Implements recommendations to optimise human performance.

Element 7.1 Relates effectively to clients at all levels of personnel.

Performance Criteria

7.1a Communicates with the users, management and other professional colleagues in relation to method of implementation of the new design or risk control measures.

7.1b Uses appropriate processes to motivate the client to participate in the recommended ergonomics program and to take responsibility for achieving defined goals.

7.1c Where appropriate, provides individual guidelines for personnel in a form understandable to the client.

Element 7.2 Supervises the application of the ergonomic plan.

Performance Criteria

7.2a Implements appropriate design or modifications.

7.2b Facilitates the adaptation to new approaches to activity.

7.2c Provides appropriate feedback on progress to client.

7.2d Incorporates methods to allow continuous improvement.

Element 7.3 Manages change effectively

Performance Criteria

7.3a In a work environment, where necessary, overcomes resistance of workers, managers and labour unions to change, and gains their co-operation for implementing new approaches.

Unit 8. Evaluates outcome of implementing ergonomic recommendations.

Element 8.1 Monitors effectively the results of ergonomic design or intervention.

Performance Criteria

8.1a Selects appropriate criteria for evaluation.

8.1b Assesses level of acceptance of and satisfaction with implemented ergonomic measures.

8.1c Produces clear, concise, accurate and meaningful records and reports.

Element 8.2 Carries out evaluative research relevant to ergonomics

Performance Criteria

8.2a Demonstrates rational, critical, logical and conceptual thinking.

8.2b Critically evaluates new concepts and findings.

8.2c Demonstrates a knowledge of basic research methodology for ergonomics research in an area relevant to individual ergonomic expertise.

Element 8.3 Makes sound judgements on the quality and effectiveness of ergonomics design or intervention.

Performance Criteria

8.3a Considers the cost effectiveness of the program in terms of financial implication, improvement in productivity, product useability and human requirements for the enhancement of comfort and safety.

Element 8.4 Modifies the program in accordance with results of evaluation, where necessary.

Unit 9. Demonstrates professional behaviour.

Element 9.1 Shows a commitment to ethical practice and high standards of performance and acts in accordance with legal requirements.

Performance Criteria

9.1a Behaves in a manner consistent with accepted codes and standards of professional behaviour.

Element 9.2 Recognises personal and professional strengths and limitations and acknowledges the abilities of others.

Performance Criteria

9.2a Recognises extent of own knowledge in ergonomics, appreciates areas where knowledge and skill are lacking and knows what to do and whom to contact to access missing expertise.

9.2b Demonstrates a desire for life long learning, regularly reviews and updates knowledge and skills relevant to current practice of ergonomics, to ensure appropriate breadth and depth of understanding.

9.2c Recognises those areas of ergonomics where knowledge is limited and consults appropriately with professional colleagues to ensure application of relevant expertise to particular problems.

9.2d Recognises the value of team work between multidisciplinary experts.

Element 9.3 Maintains up -to- date knowledge of national strategies relevant to ergonomics practice.

Performance Criteria

9.3a Demonstrates knowledge of government legislation relating to occupational health, control of environmental hazards and other areas relevant to ergonomics practice.

9.3b Understands the industrial, legal and liability issues that impact upon professional ergonomics practice, and takes appropriate action regarding them.

Element 9.4 Recognises the impact of ergonomics on peoples' lives.

Performance Criteria

- 9.4a Appreciates the social and psychological impact of ergonomics investigations.
- 9.4b Appreciates professional responsibilities and requirements.

Documentation on Professional Recognition in Ergonomics: Introduction to Scope and Intention 4.3. GR

A. Introduction

1. Five initiatives concerned with the professional recognition of ergonomists are being undertaken by the IEA as follows:

1. Core Competencies for Practitioners in Ergonomics [short name: Competencies]
 - Summary version
 - Full version
2. Minimum Criteria for the Process of Certification of an Ergonomist [short name: Certification Criteria]
3. Criteria for IEA Endorsement of Certifying Bodies [short name: Certification Endorsement]
4. Accreditation Procedures Guidelines for Ergonomics Education Programmes [short name: Accreditation]
5. Directory of Ergonomics Education Programmes [short name: Education Directory]

2. These initiatives were set up in response to requests for information and assistance from the Federated Societies. There have been requests for advice about: the education and recognition of professional ergonomists; methods of ensuring the quality of ergonomics education programmes; and the qualities which should characterise a 'professional ergonomist'. The diverse needs expressed have reflected the differing sizes, goals and levels of activity of the various Federated Societies, from Societies which want to support the establishment of first courses in ergonomics, through to others which want to protect the ergonomics profession from improper use of the term 'ergonomist' by unqualified individuals or groups.

3. Task forces were established to examine each of the five areas of concern; two of these task forces (Accreditation and Education Directory) are still operational and will report and make recommendations to the 2000 Council Meeting. Following wide discussion, papers containing guidelines for each of the other three activities were presented at the IEA Council meeting at Tampere in 1997, and during workshops held during the IEA Congress. The recommendations were disseminated to Federated Societies for their information and comment in August 1997. It was agreed that they were living documents and that regular updates would take place, to reflect changes in practice or views over time. Following responses from Societies, the guidelines were presented once more to IEA Council in September 1998, where they were accepted. Councillors for each Federated Society hold copies.

4. It must be emphasised that the IEA provides guidelines only, and use of these by Federated Societies is entirely voluntary. There is no attempt by the IEA to be prescriptive at an international level nor to dictate national activities. Documents such as the IEA core competencies and the criteria for accreditation of educational programs (planned for presentation in 2000) may be helpful for educational institutions, but are not obligatory requirements.

Figure 1 shows linkages between the different initiatives and their associated guideline documents ...

Figure 1

B. Competencies

5. The summary version and the full version of the IEA document 'Core Competencies for Practitioners in Ergonomics' have been accepted by IEA Council. These contain Units, Elements and Performance Criteria, produced after discussion and consultation at an international level. The Competencies document does not represent certification requirements for 'professional ergonomists', nor curriculum requirements for educational programs, although Federated Societies or Institutions may find it useful as a resource for either.

6. The IEA recognises that any outline of competencies has a limited life and that regular review is important. Also, even as guidance, an outline of competencies must not be too prescriptive. The IEA anticipates that Societies will suggest amendments, deletions and additions and welcomes such contributions. The IEA plans to discuss any such suggestions at the next IEA Congress in 2000, where wide international input will provide background for modifications.

C. Certification Criteria

7. While some Federated Societies (or regional groupings) already have a process in place for the Certification of ergonomists, the IEA has received numerous requests for guidance from other Societies contemplating the introduction of Certification. Through the PPE Committee, the IEA has developed a set of minimum criteria relevant to the process of certification.

8. The IEA Guidelines are meant to be informative and to assist Societies in the development or review of their own process of certification, if they wish to have one. The IEA, which encourages the move towards certification, appreciates the need for flexibility. Presentation of a set of minimum criteria does not prevent countries, Societies or other bodies from developing other approaches or more stringent standards, but it does allow us to acknowledge, at an international level, that there is a minimum standard which all systems should meet. Criteria for the endorsement of a certifying body by the IEA have also been prepared for the guidance of those Societies establishing a Board or Committee to be responsible for a certification process.

9. These sets of criteria will evolve and further comments from Federated Societies will be welcomed for the IEA's discussion at its triennial review, due in 2000.

D. Certification Endorsement

10. Requests from Federated Societies for concrete assistance has led to the establishment of an IEA Certification Endorsement Sub-Committee chaired by Hal Hendrick. This is to review and, if appropriate, endorse certifying bodies and their individual systems of certification, according to the IEA Guidelines. The IEA's endorsement of a Society's (or other body's) system of certification would indicate that it had met the minimum criteria established internationally. The IEA Council approved the establishment of this Sub-committee and its terms of reference in 1997.

11. Submission of details of a certification process and certifying body for IEA endorsement is entirely voluntary.

E. Review of Guidelines

12. As suggestions are received from Federated Societies for modification to the IEA documentation on professional recognition, these are being collated. At the next formal review of the documents (IEA 2000), they will be incorporated, where appropriate, in proposed revisions. The IEA will continue to reflect a good international consensus in such matters of professional standing and recognition.

1. Preparation

1.1 The Chair appoints an Endorsement Review Group (ERG), containing at least three other members of the Endorsement Sub-Committee. No appointees should have any potential conflict of interest, nor should there be any perception of such.

1.2 The Chair will notify the proposing body of the names of the Review Group, give them information on mechanisms and likely timescales and notify them of the appropriate fee. This fee must be paid to the Treasurer of the IEA before the process can begin; the IEA will send receipt of payment.

1.3 The Chair sends out to the ERG the application forms and documentation received from the proposing body, the detail in which should be compatible with the minimum criteria set down by the IEA, and agrees on target dates and mechanisms.

2. Review Procedures

2.1 The Chair allocates responsibilities to ERG members for: review of documentation, interviews, consultation with personnel, drafting of comments and recommendations.

2.2 The ERG gives initial consideration to the documentation. If this is acceptable, detailed consideration is given to the manner in which process and standards satisfy:

- i) IEA criteria for endorsement of certifying bodies
- ii) IEA minimum criteria for certification of an ergonomist
- iii) IEA competency standards or a sub-set of them

2.3 The Chair communicates with the proposing body to clarify any outstanding issues and to explain processes as necessary.

2.4 The Chair invites the relevant Federated Society(ies) to make a report on the acceptability or otherwise of the application.

3. Report

3.1 The Chair is responsible for finalising the report.

3.2 The report should include an overview of the findings, comments, recommendations, justification, and any possible request for revision.

3.3 The report is distributed to the IEA Executive Committee, who confer (in person or by email) to finalise the recommendations.

3.4 The IEA sends the recommendations to the proposing body, and gives the body four weeks to notify any intention to respond formally. A further six weeks is allowed for response.

3.5 The IEA considers any response from the proposing body and then communicates the final recommendations to the body.

Report: A good deal of the activity of the Technical Committees during the past several months has focused on the IEA 2000 Congress in San Diego. A number of TCs have proposed multi session symposia. A goal for the Congress is to have greater participation of the TCs than we did at the 1997 Congress in Finland.

One area in which progress has been slower than hoped is the effort to get information in the web site regarding the TCs. A renewed effort is underway to have an up-to-date web page for each of the TCs. These pages would contain information about goals, membership and activities of the groups. The various TCs have been requested to provide this type of information to the chair of the S&T in the form of reports. These reports will be put into a common format and distributed to Council at the Santorini meeting. It is anticipated that the web site will help stimulate interest in and communication with the various groups, which, in turn, will contribute to IEA achieving its objective of knowledge exchange and collaboration.

A second area in which progress has been slow is the scheduling of organized conferences. One of the goals of IEA is to promote such conferences. There are, however, impediments to scheduling such meetings: resources are needed, they take a great deal of time and energy, and as a couple of TC chairs recently noted, "There are already so many conferences to go to, do we need more?" Hence, it seems clear that we need a strategy for encouraging conferences that focus on topics that do not duplicate other meetings, that introduce innovative formats (including technology), and that lead to meaningful accomplishments and outputs. Efforts are underway to formulate such a strategy.

Voting Item: While not specific to the S&T Committee, several policy documents have been drafted that have implications for the work of the Committee. Obviously the Strategic Plan fits this category. Also, the policies on Journal Endorsement and Document Endorsement define procedures in which S&T is centrally involved. An area for discussion and possible voting concerns the types of documents that should be candidates for endorsement.

Request Item: We have had requests from three different TCs for IEA financial support for various activities. Some policies/guidelines are needed with regard to funding or not funding such requests. Information: The chairs of the P&P and the S&T Committees have been assigned to develop an IEA exhibit for the 2000 Congress. The exhibit represents an opportunity to communicate to a lot of people information about IEA; our mission, our goals and objectives, our organization, and the variety of activities that characterize IEA efforts. Ideas and suggestions are welcome.

A few of the 21 TCs have been inactive for some period of time. A change in leadership and/or termination of the TC will be necessary in the near future. Also, discussions have been underway about the possible formation of one or two new TCs.

PROGRESS REPORT

0. This report describes developments made on the topics:
 1. Book distribution
 2. IEA homepage in Internet
 3. The IEA Journal of Ergonomics & Human Factors

1. PUBLICATIONS AND BOOKS DISTRIBUTION

According to current rules 11 copies are required to the IEA by the organizers of the IEA sponsored conferences, and one copy of the proceedings from the IEA sponsored conferences has to be distributed for the IEA library which is located at HFES Headquarters. During the reporting period the proceedings of the CAES '99 Conference have been distributed to the information distributors listed below and to the IEA Library by Professor Pedro Mondelo.

It was agreed at the Executive Committee meeting in February that when the organizers of an event are given the status of the IEA sponsored conference, they will in the same letter also be obliged to distribute the proceedings to the information centers directly and the list of addresses would be given to them already in that phase. The Chairman of the Science and Technology Committee will remind and follow up this duty when being in contact with the organizer.

It has been suggested that as an information distribution center the University of Calcutta should be replaced by:

Prof Gaur G. Ray
Industrial Design Centre
Indian Institute of Technology Bombay
Powai, Mumbai 400 076 India
Email: ggray@abhikalpa.idc.iitb.ernet.in

Negotiations about this change are going on.

The list of the current information distributors is as follows:

Prof. Francisco Fialho
Universidade Federal de Santa Catarina
Campus Universitario, Trindade,
Florianopolis SC 88040-900
BRAZIL

Dr. Alexander Burov
National Research Institute for Design
All-Ukrainian Ergonomics Association
Post Box 3, 254214 Kyiv
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Prof. Adnyana Ida Manuaba
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Prof. Antonio Riaz
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Mariano CP 19390, Havana
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Professor Wei Runbai
Shanghai Bureau of Higher Education
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500 Shanxi Road (N)
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Director G. Duobinene
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Dr. Chaiyuth Chavalitnikul
National Institute for the
Improvement of Working
22/3 Baromrachachonnanee Rd.
Taling Chan, Bangkok 10170
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2. IEA HOMEPAGE IN INTERNET

The IEA homepage is operational at the address

<http://ergonomics-iea.org>
(IP: 130.230.37.10)

The old address (www-iea.me.tut.fi) is also still functioning.

Several comments and suggestion has been received concerning the outlook and information structure concerning the IEA web-page. Taking into consideration all comments the structure and menu has been modified. The main menu is now as follows:

insert Figure here

All chairs of the technical committees have been asked to provide information concerning their activities to the chairman of the Science and Technology Committee, prof. Ken Laughery, who is the responsible for the content regarding technical committees. After his review this information has been added to the IEA web-pages.

The weekly activities concerning the Internet-site have been backing up the information, maintaining the site and it's content and adding new information to the site when received. The update activity has been continuous, and it's intended to happen within a week from receiving new information. A new alternative outlook for these pages is under design, and will be presented for review latest in autumn 1999.

Web based copy of Ergonomics International is published regularly. The latest edition is May 1999. At the present moment the following older issues are accessible through the web pages:

- May 1998
- August 1998
- November 1998
- February 1999

A policy-paper "How to publish information in the IEA website" prepared by prof. M. Mattila was discussed at the Executive Council Meeting in February and approved. After that the policy has been implemented. It is presented below.

The IEA web homepage editing and practice policy

The aim of the IEA web homepage is to serve as an information channel of the IEA:

- To give updated information of the IEA
- To distribute information between organizational units of the IEA, like the Council, officers, the Executive Committee and member organizations
- To serve as a data source for current activities in the field of ergonomics, like conferences, journals and news
- To publish the electronic version of the Ergonomics International (EI)
- To involve the Electronic Journal "The IEA Journal of Ergonomics"

Publication policy

1. The web site is an information tool of the Executive Committee, which serves as an editorial board for the website
2. The publication policy, structure and information categories of the IEA web site is decided by the Executive Committee
3. The chair of the Publications and Promotions Committee is the Production Manager of the website and responsible for the practical management of the website according to the financial resources.
4. Executive Committee members are responsible of providing, revising and updating information concerning his/her standing committee.
5. The chair of the Standing Committee for Science and Technology coordinates the information for Technical Committees. According to his/her guidelines and approval information concerning different Technical Committees will be published.
6. The IEA Newsletter Editor, Andy Marshall, is responsible for the Ergonomics International, as well as providing up to date news to web site's News categories.
7. All persons who have news they would like to add to the IEA web site, should submit them to the News Editor, who screens the news and makes the decision to or not to publish them.
8. All information, which is for web publication should be sent in an electronic format to Production Manager of the website, prof. Markku Mattila.

Practical points

1. The easiest way to send information is the e-mail.
2. Markku Mattila: e-mail: mattila@cc.tut.fi
3. Andy Marshall: e-mail: andy_marshall@compuserve.com

1. When sending long texts, the best file formats are RichTextFormat (RTF) and plain ASCII Text (TXT).

These are easiest to modify to HTML-format. (of course readymade HTML would be ideal). Any figures or pictures should be in GIF or JPEG formats. WinWord 97 and PowerPoint 97 -formats or lower are also acceptable.

2. The information will be published in a two weeks time from receiving.

3. The budget must be approved for production, re-design and updating the website. Budget for the year 1999 is presented in annex 1.

Establishment and infrastructure of the website

The responsible person for the web site production and content is Prof. Markku Mattila (chair of the Publications and Promotions). Technical details are on the responsibility of Mr. Markku Leppänen. When needed additional co-workers will be hired. The address of the web site is:

<http://ergonomics-iea.org>
IP:13.230.37.10

The IEA web server is at the present moment hosted by the Tampere University of Technology/ Occupational Safety Engineering. The homepage's content was transferred from Louisville to Tampere during autumn 1997 and the revision of the homages were finalized during spring 1998. IEA Officers were requested to check the homepages and give comments and feedback concerning the outlook and information structure. In August 1998 in Cape Town the homepages were presented to the IEA Council and Executive Committee.

3. THE IEA JOURNAL OF ERGONOMICS

The name of the Journal has been changed from IEA Journal of Ergonomics and Human Factors to the IEA Journal of Ergonomics as agreed.

The present address of the journal is:

<http://ergonomics-iea.org/iea/journal/>

Some minor problems have been detected in cgi binaries and pler scripts (for example the subscription) which results of moving from UNIX based system to Windows NT platform. The problems due to this change will be solved as soon as possible.

The Editor of the Journal, Professor Martin Helander, is working for the first article to be published. Several papers are in the review process.

Current Situation:

The vast majority of the world's working population are employed in IDC's where working conditions are often poor to appalling; yet in most of these areas there is very little knowledge, or practice, of Ergonomics.

Fortunately some individual efforts have been made to introduce the principles of Ergonomics into some of IDC's, but unfortunately these are generally conducted in isolation with very little communication between work sectors or geographical regions even with those IDC's.

Objectives of the IDCC:

To identify key contact personnel in regional areas and to set-up a "Communication network" in order to establish formal contact, facilitate dialogue, identify needs and to disseminate information.

Current Initiatives:

1998/99 Outreach:

A list of 61 contacts has been drawn up, consisting of council members of IDC Federated Societies and other interested individuals who committed themselves to the promotion of Ergonomics in IDC's at the Global Ergonomics Conference in Cape Town last year (see attached list). Two questionnaires (also attached) have been circulated to the above, either through e-mail, fax or postal deliveries.

The responses have been extremely poor; it is ironic that interest in, and willingness to commit to, Ergonomics appears to be inversely proportional to the need for ergonomic enrichment. While initial contacts sound enthusiastic and encouraging the follow-up (or lack thereof) is extremely frustrating.

Africa is manifestly industrially and socio-economically behind Latin America and most of Asia, and the Continent as a whole epitomises the greatest need, and paradoxically the lowest level of appreciation of this need, for Ergonomics.

1999 Achievements:

Two successful workshops based on the "Ergonomic Checkpoints" have been run by Professor Houshang Shahnava; one in Swaziland (Southern Africa) and the other in Mumbai (India). In both cases local Ergonomists were involved in the running of these workshops and should now be able to conduct similar workshops in local regions of their respective countries.

Kamiel Vanwonderghem ran a successful four day Ergonomics Workshop in South East Asia which was sponsored by the European Union.

Consultancies and seminars have been conducted in several companies within South Africa with 'Ergonomics Teams' being initiated to establish an ongoing awareness of, and commitment to, Ergonomics.

Proposed Action:

1) Sub-committee: There is a need to set up a sub-committee comprising multi-national regional representatives. Nominations will be called for at the council meeting.

1) Ergonomists: We need to compile a list of experienced Ergonomists who are willing to assist in developing a culture of Ergonomic understanding in IDC's.

1) Finance: There must be an aggressive search for financial support, to cover travel and material expenses of educator-ergonomists prepared to conduct workshops/seminars around the globe.

1) Education and Training programmes: These can only be effective if we organise and run numerous "Roving Seminars/workshops", not only for a cross-section of workers, but also for potential local leaders to run further workshops and to assist companies in the setting up of Ergonomics Teams in order to encourage on-going Ergonomics evaluations and interventions, the main drive being to: **"Help others to help themselves"**.

1) Consultation: Consultation is necessary to assist in the identification of problem areas and bring in "no-cost, low-cost" intervention strategies. We need to encourage quantification of results and demonstrate the economical benefits of sound Ergonomic principles.

1) Research specific to IDC: We must establish rigorous methodological approaches to the evaluation of the indigenous workforces, and in the analysis of task demands and work sites. There is a need to build up a data base of worker and work station information and to report on findings and proposed solutions to problem areas in international journals. Dissemination of knowledge is the ultimate goal.

On-going activities:

With the Chairperson of the IDC's being situated in South Africa together with the African need for Ergonomics being identified earlier in the report, plus the minimal funding available, the focus for 1999 and into 2000 will be mainly, but not exclusively, on Africa. Initial planning is underway to run further 'Roving Seminars' in SADC (*) and central African countries viz. Kenya, Namibia, Mauritius and Zimbabwe. Good contacts have been established, and in most cases ministerial support is being sought to ensure an official commitment from all sectors in these regions.

The ILO has donated a number of Ergonomic Checkpoints books for the running of these workshops.

Specific Needs:

◆ IDC contacts: Establishing contact has not been easy and responses are slow. We need assistance in identifying responsible and organised people in needy regions.

◆ Assistance: FINANCIAL ; Personnel ; Materials

(*) Southern Africa Development Community (SADC) is a sub-regional group consisting of: Angola, Botswana, the Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

Responses to Questionnaires:

Greatest Needs: All areas identified.

Least relevant: Cognitive, Computers, Organisational Design, Management

Most important areas: Musculo-skeletal, Workstress

IDC CONTACTS 12.05.99

*and italics: = Living and actively involved in IDC's

_ = Actively involved

Italics: = Living in IDC's

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Dear

___As a member of the IEA Executive Council, I am appealing to you directly, in your capacity as Chairperson of the Ergonomics Society of....., a valued member among the Federated Societies of the I.E.A., to furnish your personal considered opinion in respect of the following questions. My purpose, as the questions below will make clear, is to enlighten the IEA's Committee on Industrially Developing Countries as to the major ergonomics needs of IDC's as perceived by recognised authorities around the world. The IEA is sensitive to the fact that ergonomists in the Industrially Developed Countries predominate in numbers yet are relatively ill-informed as to ergonomic conditions and needs of the Federated Societies representing IDC's. The aim of this appeal is to identify areas of greatest need, and methods by which the IEA can be of service to the Federated Societies concerned.

Your personal response to the following questions would be greatly appreciated:

- (1) Which sector in the list below, in your opinion, is:
(a) in greatest need of ergonomic intervention in your country;
(b) which sector in this list is best catered-for in terms of ergonomic input?

	Greatest Need	Best catered for
Agriculture
Mining
Large Industry
Small Industry
Transport
Forestry
Fisheries
Urban/Municipal
Energy provision
Construction
Other (please specify)

Check, and indicate the area of highest, and the area of lowest priority)

- (2) Which aspect of ergonomics in the list below, is in your opinion the aspect which:
(a) should be most concentrated on in your country;
(b) is the aspect which you consider to be least relevant to your situation?

	Most Important	Least relevant
1) Manual Materials Handling
◆ Accident prevention
◆ Musculo-skeletal workstress
◆ Cognitive ergonomics
◆ Computer ergonomics
◆ Socio-technical systems
◆ Workstation/Workpractice design
◆ Machine interactions
◆ Cumulative Trauma Disorders
◆ Participatory Ergonomics
◆ Organisational Design & Management
◆ Other (please specify)

- (3) Should funding be provided, would there be interest from your country in participating in the IEA/ILO Roving Seminars on the theme of education in practical down-to-earth ergonomics interventions?

Comment:

.....
.....

If local conditions are such at the present time that your response is affirmative, would the Society be in a position to assist us in setting up and conducting a Roving Seminars in Ergonomics Programme in your country?

Please note that it is not implied that your response is binding on you or your Society: my aim at this point is purely to learn about conditions in your country as a precursor to determining how the IEA might tangibly serve its Federated Societies.

A prompt personal response from you, by e-mail or fax, would be very greatly appreciated, as will any additional comments you may care to make in the furtherance of our common goal, to bring Ergonomics to the people.

With regards

P A SCOTT
(Chairperson IDCC)
Postal Address:
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Rhodes University
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Grahamstown 6140
Fax: 046 6223803 Tel: 046 6038469 e-mail: hmmps@giraffe.ru.ac.za

Greetings to you all,

I would like to really start things moving at the beginning of 1999, so please can I call on you all for assistance.

I have established a basic list of 60 people interested in Ergonomics in IDC's. Please will you all complete the attached questionnaire at your earliest convenience and return to me.

At the start of the year I want to set up an 'Action Group' to help me get a program going.

Lets be very honest: our biggest need is "FINANCIAL ASSISTANCE". If you have any ideas and or contacts please let me know.

Many thanks for your co-operation and may I take this opportunity to wish you all the very best for the festive season.

Regards,

PAT

PS: Please note that both my secretary Moira Japp (e-mail: hmmp@giraffe.ru.ac.za) and myself (e-mail: hmmps@giraffe.ru.ac.za) will be handling the incoming and outgoing correspondence.

I D C INVOLVEMENT

As I perceive the situation there are two broad categories of involvement:

- 1) Those who need assistance **B:** Those who offer assistance

As I hope to finalise the IDC mailing list please complete the following brief questionnaire as soon as possible in order that we can establish a list of needs and an action program for 1999.

◆ Those who **NEED** assistance.

◆ Country:
◆ City/Town:
◆ Contact Name:
Address:
Phone:
Fax:
E-mail:

◆ Brief outline of requirements:
eg: Ergonomics evaluation courses; training courses; course leaders; materials; literature; finance; educational guidance.

.....
.....
.....
.....

◆ Those who **OFFER** assistance:

Name:
Address:
Phone:
Fax:
E-mail:

◆ Brief outline of contribution:
eg: Financial; consultancy; education and training; materials; literature.

.....
.....
.....

Area of Expertise:
.....
.....

◆ Please check mailing list, identify corrections and make suggestions of people to add once you have permission to do so.

.....
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.....

◆ General comments:

.....

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.....

This document gives e complete listing of present awards and the rules for nomination.

OBJECTIVE OF IEA AWARDS

The objective of the IEA Awards is to give formal recognition to members of the federated societies who have made outstanding contributions to the field of ergonomic on an international level.

There are several types of awards:

- A. IEA Awards, which are handed out at the IEA Congress every third year.
- B. K.U. Smith Student Paper Award, which is handed out at IEA Congresses.
- C. The IEA/Liberty Mutual Prize, which is handed out every year.
- D. The IEA Fellowship, which is handed out yearly.
- E. Plaques, which are awarded to individuals who have served IEA in some substantial way.

The awards are managed by subcommittees:

A. Committee for IEA Awards:

Chair: Martin Helander

Members: Ian Noy, Hal Hendrick, Ilkka Kuorinka, Harry Davis,

B. Committee for K.U. Smith Student Paper Award:

Chair: Prof. Michael Smith

Department of Industrial Engineering

University of Wisconsin, Madison

1513 University Avenue

Madison, WI 53706

Members: Thomas Smith, To be complemented.

C. Committee for IEA/Liberty Mutual Prize

Chair: Tom Singleton

Members: M.M. Ayoub, K. Kogi

D. Fellows Committee:

Interim Chair: Martin Helander

Members: Hal Hendrick, Ilkka Kuorinka, Harry Davis, Sadao Sugiyama

E. IEA Plaques:

Chair: IEA Awards Chair

Members: IEA Executive Committee

A. Awards of the International Ergonomics Association.

Nominations for the IEA awards should be sent to IEA Secretary General, Dr. Waldemar Karwowski.:
karwowski@louisville.edu. Six IEA Awards are described below

1. IEA Distinguished Service Award.

The IEA Distinguished Service Award is presented to individuals for outstanding contributions to the promotion, development and advancement of the IEA.

2. IEA Founders Award.

The IEA Founders Award is presented to persons who were highly influential in founding either of IEA or of an IEA Member Society.

3. IEA Outstanding Educators Award

The IEA Outstanding Educators Award is presented to persons in recognition of outstanding contributions in the area of ergonomics education for having:

Developed ergonomics education programs

Produced new methodology and/or materials for teaching ergonomics, or

Graduated persons who have become outstanding ergonomists

4. IEA Ergonomics of Technology Transfer Award

The IEA Ergonomics of Technology Transfer Award is presented to a person, persons or organization, which has:

Developed methodology for facilitating technology transfer

Developed effective ergonomic programs for technology transfer, or

Contributed significantly to the development of human-machine systems in developing countries

5. IEA Ergonomics Development Award

The IEA Ergonomics Development Award is presented to persons who have had an international impact on ergonomics in terms of making a contribution or development which:

Significantly advances the state of the art of existing ergonomics sub-speciality, or

Opens up a new area of ergonomics research and/or application

6. IEA Presidents Award

The IEA Presidents Award is presented to persons who have made outstanding contributions to ergonomics or the furtherance of ergonomics, and whose contribution does not clearly fall into one of the other award categories. Persons qualifying for this award do not necessarily have to be ergonomists. Nominations may come from the IEA Council or the IEA Executive Committee. Final approval of this award rests with the IEA President.

FORM FOR NOMINATION OF IEA AWARDS

For use by Federated Societies to nominate an individual for an IEA Award

Award:.....

Name of person being nominated (Nominee):.....

Address:.....

E-mail.....

Fax:..... Telephone:.....

Person responsible for nomination (Nominator):.....

E-mail:..... Fax:.....

The following information should accompany the nomination:

1. Letter of nomination, 1-2 pages, should be written by the nominator and should address the eligibility criteria for the award, see IEA Basic Documents.

2. Additional letters of support may be included and may be written by persons from the same society or other societies. These letters should be collected by the nominator and included in the package. The names should be listed below:

Name:.....

Name:.....

Name:.....

Name:.....

Name:.....

3. Additional Information: Such as resume, scientific papers or other evidence which are enclosed in the nomination package, and may help in qualifying the individual and

Please list the enclosures:

.....

4. Endorsement by a Federated Society. Note that many nominees belong to several ergonomics associations. The endorsement can come from any of these associations.

Name of endorser:.....

Position held:.....

Name of Federated Society:.....

Submit this form with the nomination package to IEA Secretary General.

B. K.U. SMITH STUDENT PAPER AWARD

The purpose of the award is to honor a deserving student responsible for an application of or contribution to ergonomics.

The award will consist of a cash amount of US \$ 3,000. Any student enrolled in an accredited post-secondary institution (college, university, technical or vocational school) is eligible to apply for the award. All areas of ergonomics are eligible for consideration. Examples of applicable projects include an applied ergonomics project, a human performance study or analysis, a design project or product, a research project undertaken in the laboratory or field, or a theoretical/conceptual contribution to ergonomics. This should be documented in a paper submitted to the IEA Congress.

Students wishing to be considered for the award should submit the abstract to the Congress Technical Committee as a regular paper for possible inclusion in the Congress.

In addition the following should be submitted to the Student Award's Committee:

- (1) Five copies of the abstract for the paper. The abstract should comply with the Congress requirements for content and format
- (2) A resume with the student's name, full address, e-mail and phone numbers, institution enrolled in, experiences and a list of publications
- (3) A letter from the student's academic advisor on university letterhead certifying that the paper was written by the student, that the student is still active in the program and the paper is submitted to the K.U. Smith Student Award.

The Student Award Committee will select the student using a two stage procedure: (1) review of abstracts and resumes, and (2) review of full Congress paper. Students who will have successfully passed the first stage will be invited by the Student Awards Committee to submit full papers for final selection. Two selection criteria with equal emphasis will be used: (1) Quality of submission as documented in the Congress paper and (2) Other publications as listed in the resume.

Submissions should be sent to the present chair of the Student Awards Committee:

Chair: Prof. Michael Smith
Department of Industrial Engineering
University of Wisconsin, Madison
1513 University Avenue
Madison, WI 53706

C. THE IEA/LIBERTY MUTUAL PRIZE IN ERGONOMICS AND OCCUPATIONAL SAFETY

The award of US \$ 5,000 seeks to recognize outstanding original research leading to the reduction or mitigation of work-related injuries and/or to the advancement of theory, understanding and development of occupational safety research. To be considered for the Liberty Mutual Prize, the applicant must submit a letter of application and a research paper. The paper must be:

- An original report of laboratory, field, or intervention research
- Relevant to the field of occupational safety and ergonomics
- Non-proprietary
- Unpublished at the time of submission

- Thirty pages or fewer, single spaced.

Relevant disciplines include: ergonomics, epidemiology, biomechanics, cognitive and behavioral psychology, design, physiology, economics and optimization, etc.

In addition, every three years, the Liberty Mutual Medal in Ergonomics and Occupational Safety, is given to the best of the three awardees during the last three years. This award consists of a medal and US\$ 15,000.

An international review committee will select the winning contribution, and the prize is then handed out by the International Ergonomics Association at an international conference in 1999.

Questions Frequently asked about Liberty Mutual Award

Q1 What is the purpose of the prize?

The purpose of the prize is to recognize individuals whose efforts have contributed the reduction or mitigation of work-related injuries. In particular, the prize is awarded for an original activity leading to a better understanding of avoiding, or mitigating, occupational accidents or injuries, or in the rehabilitation and return to work of an injured worker. The main criteria, therefore, include significant advancement of theory and understanding, innovation and development of new directions or approaches.

Q2. Does the IEA endorse Liberty Mutual policy directions?

The establishment of the prize should not be construed as endorsement of Liberty Mutual. However, it is recognized that Liberty Mutual sponsors a variety of activities aimed at improving worker health and safety. The IEA shares the belief that the prize will stimulate efforts to combat the unacceptably high incidence of work-related injuries and raise awareness within the industrial, governmental and academic communities of the pervasive nature of the problem and its associated high social and economic consequences.

Q3. Is the prize limited to research efforts?

No. The prize can be awarded for any activity which contributes in a significant way towards the reduction or mitigation of occupational injuries. In addition to research, such activities may include implementing large scale programs, identifying new directions for intervention or approaches to rehabilitation, and developing new safety products.

Q4. Is this prize limited to ergonomics?

No. Significant contributions can come from a variety of disciplines such as ergonomics, epidemiology, occupational health and safety, medicine, psychology, physiology and biomechanics, engineering and management.

Q5. Why is Liberty Mutual doing this through the International Ergonomics Association?

The IEA is a federation of ergonomics and human factors societies throughout the world. As such, it fosters an extensive network of experts in work sciences and related disciplines. This network will ensure that the selection of the winners reflects the best judgment of the international scientific community. Furthermore, the implementation procedures established by the IEA ensure that decisions are impartial.

Q6. Who will select the winners?

A committee of three world-renown experts will be established by the IEA to serve for a period of three years. This committee will oversee the process and select the winners.

Q7. What does the prize comprise?

The annual Liberty Mutual Prize consists of a financial award of US \$5,000. Every three years, the best of the three most-recent winners will receive the Liberty Mutual Prize Medal which consists of a further award of US \$15,000.

Q8. When will the awards be made?

The annual prize will be awarded during an IEA-sponsored conference or a conference in the country of the recipient. The triennial medal will be given during the YEA Congress. The first Liberty Mutual Medal will be awarded during the next triennial Congress of the IEA which will be held in the year 2000 in San Diego, California.

Q9. How does one apply?

The prize will be awarded to individuals. If the winning submission names more than one individual, the named individuals shall share the award.

Q10. What is the difference between the Prize and the Medal?

The prize is awarded each year. The medal is awarded to the best of three winners every three years in conjunction with the IEA Triennial Congress.

Submission:

Persons wishing to be considered for the prize should submit an application to the IEA Chair of the Awards Committee: Prof. Martin Helander. Graduate School of Human-Machine Interaction. Linköping University, 581 83 Linköping, Sweden. e-mail: mahel@ikp.liu.se. A letter of application should be accompanied by 5 copies of a 30-page report summarizing the nature of the activities. The deadline for submission is March 1, 1999. Applicants will be notified by mid-June 1999.

D. IEA FELLOWSHIP

IEA Fellowship is to recognize extraordinary or sustained, superior accomplishments of an individual. To be considered for a fellowship two eligibility criteria must be satisfied. In addition, the candidate's distinction as an ergonomics professional must be demonstrated.

ELIGIBILITY CRITERIA. There are two eligibility criteria: International Service and Membership in Society.

1. International Service

This includes such activities as service to IEA, an extensive publication record in international journals, international consulting, service to the United Nations, and similar.

2. Membership in Society.

The candidate must have been a Full Member in good standing of a Federated or Affiliated Ergonomics Society for at least the preceding 5 years. Student membership and Associated Membership do not confer eligibility.

DISTINCTION CRITERIA

The candidate should have made outstanding contributions to ergonomics/human factors. There are many ways in which this can be demonstrated:

The candidate could have had the primary responsibility for the technical direction, supervision or management of a significant effort during a sustained period of time.

The Candidate could be a well renowned researcher, designer or consultant of great distinction.

Clear evidence of distinction should be supported by detailed descriptions and attachments to the nomination form that is submitted by the person nominating the candidate. For example, for a researcher, the most significant publications authored or co-authored by the candidate should be attached to the application. For a consultant, the most important consulting contracts should be outlined, together with the outcome of the contracts. For a designer the most important design objects should be specified. Any other information to support or attest to the achievements of the candidate should be furnished to the IEA Awards Committee, in order to support their deliberation of the candidates merits.

SUBMISSION

The application should be submitted to the Chair of the Awards Committee. The instructions were presented at the Council Meeting in Tampere, and are not repeated here.

ELECTION

The nominee's candidacy must be approved by two-thirds vote of the members of the Fellows Selections Committee. Those candidates so approved must be elected by a majority of the IEA Executive Committee.

RENOMINATION

An individual may be nominated for Fellow several times.

INTERNATIONAL ERGONOMICS ASSOCIATION
RECOMMENDATION FORM FOR FELLOW (CONFIDENTIAL).

This form is to be sent by nominator to three individuals who have promised to support the nomination.

Your name:.....

Name of Candidate:.....

Name of Individual making nomination.....

Your name has been given as a reference to evaluate the candidate named above for the status of Fellow of the International Ergonomics Association. For your convenience, IEA's criteria for Fellow status are listed on the reverse side of this page. If you feel qualified to evaluate the candidate, please check here:___

Was a copy of the completed form included for your information? Yes__ No__

If so, is the candidate's case adequately presented? Yes__ No__

Please furnish below (and/or on a separate sheet, if desired) any additional information that you believe will be helpful to the Fellows Selection Committee. Particularly, what are the Candidate's outstanding characteristics and significant contributions on which your recommendation is based?

Do you unequivocally recommend this candidate for Fellow status? Yes__ No__

Signature_____ Date_____

Address_____

Fax Number _____ E-mail_____

Please mail, e-mail or fax this form directly to : IEA Fellows Selection Committee, c/o Chair of the Awards Committee.

Application, supporting materials, and recommendations should be sent by nominator to the IEA Fellows Selection Committee, c/o IEA Secretary General.

Candidates name

Present position

Organization

Business address

Business telephone

Fax number

Home telephone

E-mail

Member of Federated Society

Year joined

Full Member continuously since year

Education

Institution

Degree, year

Field of study

Honors and Awards related to ergonomics/human factors

Professional work history in Ergonomics/human factors (attach separate sheet if necessary)

Dates (years)	Name and location of organization	Title	Responsibility
---------------	-----------------------------------	-------	----------------

Technical publications with references. Provide bibliographic citation below for each of the three most significant publications only. Also, please attach a list of all publications.

- 1.
- 2.
- 3.

Presentations: List no more than three significant presentations or invited addresses.

- 1.
- 2.
- 3.

Other significant ergonomics professional involvement, recognition and leadership. (For example, pioneering work in educational program development, service to national or international advisory boards or professional organizations)

Special contributions of candidate. The most significant contribution that qualifies this candidate for Fellow status is:

Involvement in International Ergonomics Association and/or IEA Federated Society. (For example: elected or appointed offices, service on committee or technical group, evidence of participation in IEA sponsored meetings, such as presentation of workshops or papers, session organizer, editorial board service. Please give dates of service.

Names and addresses of three full Members or Fellows (not associate, affiliate or student members) who will recommend the candidate. All must be Members in good standing who do not currently serve on the IEA Fellows Election Committee. Nominator is responsible for soliciting recommendations and return to: IEA Fellow Selection Committee, c/o. IEA Secretary General. Please do not send more than three recommendations, since only three will be forwarded to the committee. Attach any letter or endorsement provided by those recommending the nominee.

- 1.
- 2.
- 3.

Candidate nominated by:
(Must be a full member in good standing of an IEA Federated Society who is not a member of the Fellows Selection Committee).

Name:

Address:

Fax E-mail

Optional. I have attached the candidate's resume or curriculum vitae

E. PLAQUES AWARDED TO INDIVIDUALS FOR SUBSTANTIAL SERVICE TO IEA.

The plaques are awarded by IEA Executive Committee.

Chair: IEA Awards Chair

Members: IEA Executive Committee

In general, preparation for the Congress is proceeding well and on schedule.

Meeting Space and Accommodations

Both the meeting rooms and hotel accommodations have been blocked, including inexpensive housing at the University of San Diego for students and attendees from IDC's. In addition to the venue hotel, additional meeting space has been blocked at another nearby hotel, should we need it (which will be the case if we, in fact, are able to fill all 24 parallel sessions in each period in which they currently are scheduled).

Technical Tours

Lynn Strother, HFES Executive Director and Congress Secretariat, has been meeting with the three Southern California HFES Chapters to organize their participation in the Congress. Their first task, now underway, is to assist in identifying and arranging for interesting technical tours during the Congress. The San Diego Chapter, in particular, is expected to play the major role in this activity. A recent HFES Annual Meeting was held there, so the Chapter already has experience in arranging technical tours. The Chapters also will be a primary source for persons to assist with a variety of activities during the Congress.

Pre- and Post-Congress Tours

Our professional conference organizer, Prestige Accommodations, has considerable experience in arranging popular pre- and post-conference tours for attendees at Southern California Conferences. He is actively working on a broad spectrum of tours, based on what has proven popular with attendees at other international conferences.

Workshops

At present, we are planning to have full-day and half-day professional development workshops both before and during the congress. Workshop proposals have been, and still are being received (Until June 18th), and are being evaluated by the workshop committee.

Technical Program Committees

The multi-session symposia and 12 plenary sessions fall under the responsibility of the IEA Scientific Program Committee, Chaired by Ogden (Ted) Brown. These sessions collectively account for about 40% of the technical program. All other sessions fall under the responsibility of the HFES Technical Program Committee, chaired by two highly experienced technical program organizers, Jeff Kelly and Clint Bowers. Their Committee, in turn, is supported by 28 specific technical area program committees (See pages 14 and 15 of the *Invitation and Call for Proposals* for a listing of areas and committee chairs). All of these committees now are in place, and include international representation.

Plenary Topics and Speakers

Ted Brown reports that, as a result of his canvassing of the approximately 80 persons comprising both the International Scientific Advisory Board and Scientific Advisory Committee, and the IEA and HFES Councils, we now have a large list of recommended topics and speakers. We anticipate an initial selection of topics and speakers to be made by mid-June, 1999. This list then will be circulated to the IEA Scientific Advisory Committee and the IEA officers for review and comment.

In selecting plenary speakers, we will follow Council's previous advice and, in addition to academics and researchers, include a number of practitioners, prominent (relevant) government officials, and visionaries from outside the field, and ensure that a significant number of the speakers are female.

If he is available and willing, we intend to invite former Astronaut and U.S. Senator, John Glenn, to be the opening keynote speaker. Senator Glenn has a keen interest in human performance and aging, as evidenced by his most recent space trip.

Multi-Session International Symposia

In keeping with the highly successful precedent of the last two Congresses, approximately 1/3rd of the 336 scheduled technical program parallel sessions have been blocked for multi-session symposia. As in the previous two Congresses, these symposia are to be organized by the persons who propose them. Oversight is provided by the Scientific Program Committee, Chaired by Ted Brown. I am pleased to report that a total of 31 Multi-session symposia have formally been proposed for the Congress. These are listed below. As a result, we are in the very pleasant position of having more than enough proposals to fill the 1/3rd of the technical program allocated for these symposia. The proposals currently are being evaluated by the IEA Scientific Program Committee.

<u>Covener</u>	<u>General Topic</u>
Sylvie Montreuil	Process of Ergonomic Training
John O'Hara	Power Systems
Kurt Landau	Ergonomics in Agriculture
Antonio Grieco	Musculoskeletal Disorders
Nico Delleman	International Standards
Wen-Ruey Chang	Slips, Trips and Falls
Heiner Bubb	Man Modeling
Haas/Edworthy	Auditory Warnings
Munehira Akita	Asian Ergonomics
Jaap van Dieën	Biomechanics of the Low Back
Koningsveld/vdMolen	Building and Construction Ergonomics
Thomas Smith	Work Design in 21st Century
John Wood	Control Systems
Shrawan Kumar	Rehabilitation Ergonomics I
Shrawan Kumar	Rehabilitation Ergonomics II
Anand Gramopadhye	Human Factors in Aviation Maintenance
W. S. Green	Inclusive Design
Diane Damos	Pilot Selection
Goran Hagg	Corporate Initiatives in Ergonomics
Brian Kleiner	Macroergonomics Methods and Tools
Karl Kroemer	Ergonomics on Both Sides of the Atlantic
Francois Daniellou	Hospital Ergonomics
David Rempel	Office Ergonomics
Kathleen Robinette	(topic?)
Ken Laughery	Warnings
Bishu/Chin	Ergonomics & TQM
Santos	(topic?)
Hallbeck	Hand Ergonomics
Tanabe/Flach	Ecological approach to interface design
Noy/Vredenburg	Mock trials (2 of them; different issues)
Susan Meadows	Medical devices

Panel Session, Paper, Poster, Debate, and Single Session Symposia

The submission deadline for these proposals currently is June 18, 1999. Because of problems with the electronic submission system, we most likely will extend this deadline to June 30th. We anticipate receiving over 1000 individual presentation proposals.

Electronic Submission System

Because of problems encountered with our piloting of an electronic submission system for the 1999 HFES Annual Meeting, getting the electronic submission system operational for The 2000 Congress was delayed until June 1st. Based on our 1999 experience, we have simplified and limited the capabilities of the system. However, persons still will be able to submit their proposals electronically (as well as by fax or ordinary mail). Modified instructions for its use are being sent to all technical program committee chairs.

Paper Submission

All persons possessing or having access to word processors will be asked to submit their proceedings papers on a disc for electronic processing. Those who can not will be able to submit a hard copy only, which then will be optically scanned into the publication system. Papers received which are written in poor English will be edited by the IEA Secretariat and sent back to the author for review and approval. Based on the experience of the IEA 97 Congress, we anticipate from 20 to 50 papers needing editing for good English. For the IEA 2000 Congress, we have increased the maximum number of pages per paper from 3 to 4 (Some persons have indicated that they can not get credit or travel permission for a paper of less than 4 pages). Poster presentation proceedings papers will be one page each. Papers for the proceedings are due January 15, 2000.

IEA 2000 Commemorative Gift

Arrangements have been made with the Polish Ergonomics Society to enable us to provide each full registrant with a special IEA 2000 commemorative English edition of Wojciech Jaszczkowski's classic 1857 publication: *An Outline of Ergonomics or The Science of Work*.

IEA 2000 Budget

There have been two major related changes to the IEA Budget, previously submitted. The cost of processing the proceedings papers and producing them on CD for each attendee, plus other minor adjustments, has necessitated an increase in the registration fee of \$25. Secondly, the hard copy version of the proceedings now will be sold as an elective option, rather than included in the regular registration fee. The net effect of these two actions is to reduce the base registration fee by \$25. Accordingly, the planned registration fees, including the proceedings in CD form and the Sunday evening Welcoming Reception, now will be as follows:

Early Registration, Federated Society Members:	\$325
Early Registration, Nonmembers:	\$385
Student Registration:	\$125
Registration, Members (after early cutoff date):	\$375
Registration, Nonmembers (after early cutoff date):	\$435
One Day Early Registration, Member:	\$165
One Day Registration, Member:	\$190
One Day Early Registration, Nonmember:	\$190
One Day Registration, Nonmember:	\$215
Accompanying Persons	\$125

Elective Items

Banquet:	\$ 75
Welcome Reception (guests)	\$ 30
Hard copy of the proceedings, full volume set, when purchased as part of the early registration fee:	\$ 85
Hard copy of the proceedings when purchased after the early registration deadline:	\$125

Note: Hard copy purchase price still is tentative; awaiting final cost figures from the publisher. A limited number of individual volumes of the proceedings will be available for sale at the Congress.

The Congress organizers remain very pleased that we have been able to maintain a lower registration fee for this Congress than for previous recent Congresses, yet ensure a healthy surplus based on a conservative budget.

An detailed updated budget will be provided separately for the 1999 IEA Annual Executive Committee and Council Meetings.