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THE IEA IS CHALLENGING TO CREATE ITS FUTURE

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The International Ergonomics Association (IEA) entered a new term in August 2015. All the members of Executive Committee are making utmost efforts to give a new momentum to the IEA. Among many issues, we are tackling (1) the understanding of the needs of member societies, (2) the promotion of ergonomics in industrially developing countries, and (3) the understanding that ergonomics contributions to cutting-edge technologies are of higher priority. Even though these have always been the major interests of the IEA, changing environments require the IEA to implement new actions: The situations in member societies are becoming more and more diverse. The demands for ergonomics in industrially developing countries are increasing at an unprecedented speed. There are emerging technologies which may influence people's lives for good or bad. How ergonomics can contribute to these cutting-edge technologies should be understood proactively. This short article summarizes a presentation given by the author at the 29th International Symposium of Ergonomics held in June 2016, in Poland. Opinions presented in this article are that of the author, not necessarily the formally authorized views of the IEA.

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1. THE INTERNATIONAL ERGONOMICS ASSOCIATION TODAY

1.1. History of the IEA

After having discussions at several meetings and initiatives by various individuals, the Ergonomics Research Society (ERS) founded in England in 1949 held various events that had a major influence on the founding of the IEA (Ilkka Kuorinka, 2000; International Ergonomics Association, 2006). The European Productivity Agency (EPA) founded in 1953 initiated a project entitled "Fitting the Task to the

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Worker” which drew the attention of people who later played key roles in founding the IEA. A number of events synchronized the discussion and debate in the process.

A decision to explore the feasibility of an international association was made at an EPA seminar held in Leyden, Holland, 1957. In 1959, the steering (preparatory) committee of the future International Ergonomics Association (IEA), which was held in conjunction with the ERS symposium, decided on the founding of the IEA.

In 1961, the first meeting of IEA’s General Assembly was held in Stockholm, Sweden. This meeting formally completed the preparatory phase of the association and started the regular activities of the IEA.

In 1976, the IEA became the association of federated societies worldwide. It ended the period when the IEA was a society of individuals.

In 2011, the IEA became an international not-for-profit organization in Zürich (Switzerland) pursuant to article 60 et seq. of the Swiss Civil Code under the official name “The International Ergonomics Association”. The IEA is a registered “Not For Profit Association” at the commercial register in the Canton of Zürich, Switzerland under the number CH-020.6.001.285-4.

1.2. Missions and goals

The missions and goals of the IEA are defined by the IEA By-laws. The missions are (1) Elaborate and advance ergonomics science and practice, (2) Expand its scope to improve the quality of life. The goals are (1) Communicate effectively with members, (2) Advance the ergonomics science and practice at an international level, and (3) Enhance the contribution to global society.

The above defines well why the IEA exists. But, these kinds of constitutional descriptions always require additional characterizations that reflect contemporary interpretations of what needs to be done to fulfill the missions and goals. It is the author’s view that the IEA is a “facilitator”. To benefit member societies, the IEA should provide a platform where member societies can interact with one another, and where the IEA can interact with various stakeholders outside the community. Through the interactions, it is expected that up-to-date information is shared, member societies can be inspired by others in the efforts of resolving their problems, innovative ergonomics trends emerge which may potentially bring better well-being to all people in balanced ways, and a lot more. In this sense, the IEA can also be described as a “catalyst”.

1.3. Organization

The highest governing body of the IEA is the Council. The members of the Council (i.e. the Council members) consist of representatives of regular member societies of the IEA that are Federated Societies. As of the end of 2015, there are

50 Federated Societies, each representing a country or a region. Other member statuses include the Affiliated Societies, and the Networks. There are two Affiliated Societies and three Networks. In addition, there are three Corporate Sustaining Members. Table 1 summarizes the member societies.

Table 1. Members of the IEA (as of 2015)

| Member Status | Member Societies |
|-------------------|--|
| Federated Society | Asociación de Ergonomía Argentina (ADEA) |
| | Human Factors and Ergonomics Society of Australia Inc. (HFESA) |
| | Belgian Ergonomics Society (BES) |
| | Associação Brasileira de Ergonomia (ABERGO) |
| | Association of Canadian Ergonomists (ACE) |
| | Chilean Ergonomics Society (SOCHERGO) |
| | Chinese Ergonomics Society (CES) |
| | Sociedad Colombiana De Ergonomía (SCE) |
| | Croatian Ergonomics Society (CES) |
| | Czech Ergonomics Society (CzES) |
| | Asociacion Ecuatoriana de Ergonomia (AEERGO) |
| | French Language Ergonomics Society |
| | Gesellschaft für Arbeitswissenschaft e.V. (GfA) |
| | Hellenic Ergonomic Society (HES) |
| | Hong Kong Ergonomics Society (HKES) |
| | Hungarian Ergonomics Society (MET) |
| | Indian Society of Ergonomics (SEI) |
| | Ergonomics Society of Indonesia (PEI) |
| | Iranian Ergonomics Society (IES) |
| | Irish Ergonomics Society (IES) |
| | Israel Ergonomics Association |
| | Società Italiana di Ergonomia (SIE) |
| | Japan Ergonomics Society (JES) |
| | Latvijas Ergonomikas Biedrība (LES) |
| | Human Factors And Ergonomics Society Malaysia (HFEM) |
| | Sociedad De Ergonomistas de Mexico A.C. (SEMAC) |
| | Humanfactors NL |
| | Human Factors and Ergonomics Society of New Zealand (HFESNZ) |
| | Nordic Ergonomics and Human Factors Society (NES) |
| | Sociedad Peruana de Ergonomía (SOPERGO) |

Table 2 cont.

| Member Status | Member Societies |
|---|--|
| | Human Factors and Ergonomics Society of The Philippines (PHILERGO) |
| | Polskie Towarzystwo Ergonomiczne (PTerg) |
| | Associação Portuguesa de Ergonomia (APERGO) |
| | Inter-Regional Ergonomics Association (IREA) |
| | Ergonomics Society of Serbia (ESS) |
| | Human Factors & Ergonomics Society of Singapore (HFESS) |
| | Slovak Ergonomics Association |
| | Ergonomics Society of South Africa (ESSA) |
| | Ergonomics Society of Korea (ESK) |
| | Asociación Española de Ergonomía (AEE) |
| | Swiss Ergonomics Association (SwissErgo) |
| | Ergonomics Society of Taiwan (EST) |
| | Ergonomics Society of Thailand (EST) |
| | La Société Tunisienne d'Ergonomie (STE) |
| | Turkish Ergonomics Society |
| | All-Ukrainian Ergonomics Association |
| | Chartered Institute of Ergonomics & Human Factors (CIEHF) |
| | Human Factors & Ergonomics Society (HFES) |
| Venezuelan Association of Ergonomists (VAE) | |
| Affiliated Society | Human Ergology Society |
| | Ergonomics Society of Nigeria (ESN) |
| Corporate Sustaining Member | Federation of European Ergonomics Societies (FEES) |
| | La Unión Latinoamericana de Ergonomía (ULAERGO) |
| | The South East Asian Network of Ergonomics Societies (SEANES) |

The executing body of the IEA is the Executive Committee. It consists of three elected officers (i.e. President, Vice President & Secretary General, and Vice President & Treasurer), six standing committee chairs, and other ex-officio members. The following are the six standing committees.

1. Science, Technology and Practice Standing Committee (STP)
2. Professional Standards and Education Standing Committee (PSE)
3. International Development Standing Committee (ID)
4. Development and Promotion Standing Committee (DP)
5. Communications and Public Relations Standing Committee (CPR)
6. Awards Standing Committee

Other ex-officio members include the IEA Triennial Congress organizer, Swiss-resident director, historian, and ICT director, who may change from time to time depending on needs.

2. ONGOING ACTIVITIES AND PLANS

2.1. Framework

Activities being implemented are planned in line with strategies recommended by the Future or Ergonomics Report, which was produced by an ad hoc committee under the Development and Promotion Standing Committee (Dul, 2012).

An ad hoc committee entitled ‘The Future of Human Factors/Ergonomics Task Force’ has been formed to develop long-term implementation plans. Short-term plans being implemented will be reviewed and might be adjusted when the long-term implementation plans become available.

2.2. Short-term plans being implemented

In this clause, topics that highlight the short-term plans for 2015-2018 are summarized. The plans are subject to continuous update as a result of development of underlying ideas and of prioritization.

Reaching-out: There is a strong belief that the IEA needs to dynamically update itself to match the global realities. It is the time for IEA to change itself in order to continue to be a useful existence in the society as well as in the ergonomics community. This is aligned with the ideas of Wilson (2014) who challenged the understanding of what it means to do human factors and ergonomics. In conservation science Vance-Borland and colleagues (2011) argued that “Conservation science frequently does not lead to conservation action,” and the same could be argued for human factors and ergonomics. One way, and perhaps the best way of dynamically changing IEA within this context is to put IEA into a situation where it interacts more with a variety of stakeholders (Knight et al., 2006). IEA needs to reach out and expand our contributions to related international organizations, e.g., ISO/TC159, WHO, ILO, ICOH, IOHA, and interact with various stakeholders, e.g., related scientific/technical communities, company executives, legislators, the public, who are new partners. This strategy will expand the scope of IEA’s activities dramatically. An attempt was already made in Africa in which IEA is challenging to initiate new roles such as approaching and encouraging local stakeholders to fund projects for their own benefits.

Assuring the quality of ergonomics experts: It is meaningful in many ways to assure the quality of ergonomics experts (Dul et al., 2012). Certification of professional ergonomists is a typical approach. However, it looks like the meaning of a certifying body can be very much different from country to country. This is obviously a result of different needs for certification in different countries. IEA has to understand more about its role in promoting certification of professional ergonomists in the global context. Table 2 summarizes certifying bodies recognized by IEA. There must be more certifying bodies which are not yet known to IEA.

Table 2. Certifying Bodies for Professional Ergonomists Recognized by IEA (as of 2015)

| Country | Existing | IEA Endorsed | Planning |
|----------------|----------|--------------|----------|
| Australia | X | X | |
| Brazil | X | | |
| Canada | X | | |
| China | | | X |
| Chile | X | (X) | |
| Europe (CREE) | X | X | |
| Germany (CPUX) | X | | |
| India | | | X |
| Japan | X | X | |
| Japan (HCD) | X | | |
| Korea | X | | |
| Mexico | X | | |
| New Zealand | X | X | |
| Russia | | | X |
| SEANES | | | X |
| South Africa | | | X |
| UK | X | X | |
| USA | X | X | |

IDC developments: Industrially developing countries (IDC) form a major member constituent of IEA. The number of IDC members has been increasing, and no doubt will continue to increase in the future not only in terms of individual societies but also in terms of regional networks. Ergo Africa is expected to apply for the IEA endorsement. A new intra-continental network is being conceived for BRICS (Brazil, Russia, India, China and South Africa) countries (BRICS Network). Another potential new initiative is the Asian Conference on Ergonomics and Design (ACED). The Korean Ergonomics Society organized the first ACED and it was held in 2014. They are trying to expand coverage, and hold an international

conference every three years. The second ACED will be organized by Japan Ergonomics Society in 2017. ACED will give an additional momentum in Asia.

There are several sources that indicate the need for ergonomics to be highly contextualized to the country and/or region within which it is being applied (Wisner, 1985; Lange-Morales et al., 2014; Wilson, 2014). Within this context, and with ergonomics being in high demand in IDCs, there are needs for a better production process, better workplace,... that match IDCs. To satisfy these, the following need to be established in sustainable ways:

- Better ergonomics training opportunities for local trainers, e.g., university professors
- Matching local features, e.g., education level
- Finding locally acceptable solutions
- Establishing local legislation on ergonomics
- Applying ergonomics in more adaptive manners
- Contributing to the economy, especially export

IEA is trying to work closer with regional networks, i.e., FEES, ULAERGO, SEANES, and ErgoAfrica, and support ACED. This is aligned with the goals expressed in the paper on the future of ergonomics by Dul and colleagues (2012), which identified the need to interact with not only local but also regional stakeholders. Within the IEA context these networks form an integral part of understanding and establishing contact with regional stakeholders. The efforts the IEA may make in this regard include enhancing its websites, helping conferences, organizing face-to-face meetings with IDC members, organizing ad hoc committees within the IEA, promoting technical projects within the framework FoE, and promoting public relations. Expected outcomes include more flexible participation to the IEA family, helping regional certification schemes, founding new societies, promoting training opportunities, assisting student exchanges, and promoting publications, e.g., ergonomics guidelines.

Reinforce the leadership role in promoting scientific activities: Although IEA is not a scientific body by itself, it has been playing a major role in promoting scientific activities by means of organizing Technical Committees (TCs). There are many emerging cutting-edge technologies which may potentially change our lives for good or bad, e.g., Artificial Intelligence. Ergonomics usually lags behind technology-oriented development. This reactive feature needs to be corrected and ergonomics should act proactively to shape cutting-edge technologies in favor of humans and business as well (Hollnagel, 2014). Two new TCs have already been founded to cover new technical trends, e.g., advanced imaging technologies.

Some highlights: Recently, ISO published a new international standard ISO27500: Human-centred Organization. This standard emphasizes the need for company executives to be involved in ergonomics projects. This is an unprecedented, unique standard. ISO27500 specifies seven principles listed below. If a company satisfies these principles, it is considered to be a human-centred organization.

1. Take individual differences as an organizational strength
2. Make usability and accessibility strategic business objectives
3. Adopt a total system approach
4. Ensure health, safety and wellbeing are business priorities
5. Value employees and create a meaningful work environment
6. Be open and trustworthy
7. Act in socially responsible ways

Though ISO 27500 is considered to be useful for ergonomics, it only provides a general framework with a few examples of good practices. It is necessary to clarify how to implement it in reality. It is evident that stakeholders and professional ergonomists must work together. One member society plans to conduct a survey into company executives about their recognitions concerning ergonomics.

In 2008, IEA released Ver. 1.11 of Ergonomics Quality in Design (EQUID). This guideline emphasizes the need for stakeholders to play more roles. Recently, a furniture manufacturer presented a report that they successfully applied EQUID to achieve cost reduction as well as better well-being.

Balancing performance and well-being is a main focus of ergonomics (Carayon, 2009). In IDCs, low cost solutions (LCSs) are vitally important. No matter how good performance and well-being are, high costs are prohibitive. This LCS approach gives us an opportunity to reconsider the technology-oriented approach that usually dominates and think about essential functions.

3. CONCLUSION

The International Ergonomics Association (IEA) entered a new term in August 2015. IEA has a history of almost sixty years. The major missions and goals of the IEA have been unchanged since it was founded. However, the situations in member societies are becoming more and more diverse. The demands for ergonomics in industrially developing countries are increasing at an unprecedented speed. There are emerging technologies which may influence people's lives for good or bad. How ergonomics can contribute to these cutting-edge technologies should be understood proactively. IEA has to renovate itself continuously so that it can play the leadership role proactively. IEA is making every effort to satisfy this requirement.

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MIĘDZYNARODOWE STOWARZYSZENIE ERGONOMICZNE KREUJE SWOJĄ PRZYSZŁOŚĆ

Streszczenie

Międzynarodowe Stowarzyszenie Ergonomiczne (IEA) rozpoczęło nową kadencję w sierpniu 2015 r. Wszyscy członkowie Komitetu Wykonawczego dołożą wszelkich starań, aby nadać IEA nowej siły. Między innymi zajmujemy się (1) zrozumieniem potrzeb społeczeństw członkowskich, (2) promowaniem ergonomii w krajach rozwijających się przemyślowo, oraz (3) zrozumieniem, że wkład ergonomiczny w zaawansowane technologie ma duże znaczenie. Pomimo tego, że zawsze były to główne interesy IEA, zmieniające się warunki wymagają, aby IEA wdrożyła nowe działania: sytuacje w społeczeństwach członkowskich stają się coraz bardziej zróżnicowane. Zapotrzebowanie na ergonomię w krajach rozwijających się w przemyśle wzrasta z niespotykaną prędkością. Istnieją nowe technologie, które mogą wpływać na życie ludzi dobrze lub źle. Wkład ergonomii w najnowocześniejszych technologiach należy rozumieć w sposób proaktywny. W tym krótkim artykule podsumowano prezentację autora na 29 Międzynarodowym Sympozjum Ergonomii, która odbyła się w czerwcu 2016 roku w Polsce. Prezentowane opinie są poglądami autora, a niekoniecznie oficjalnie zatwierdzonymi opiniami IEA.

Słowa kluczowe: IEA

