SYMPOSIUM 'ACCESSIBLE DESIGN AND STANDARDS'; CHAIR: KENJI KURAKATA (JAPAN)

An analytical overview of forming up process of ISO/IEC guide 71 - A Japanese trial for collaboration between civic and policy sectors

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With society matures, it's being more common, not just in advanced nations but worldwide, to face with such subjects as increase of population of elderly people and as level up of care for disabled persons. Under these requirements, building up sustainable system is urged.
The author would focus on Japan's attempts to deal with physical barriers with providing dual use goods. A civic organization in Japan, where elderly and handicapped persons are actively involved, presented the new approach. The new concept would harmonize with decreasing inconvenience of daily living and economic viability in providing such goods. The concept is called Kyoyo-hin (or accessible design, internationally) which is dual use goods or design for having or not having physical impairments. Based on this concept, the Japanese government proposed carrying out international standardization. In response to approval, the concept was argued internationally, and was published as 'ISO/IEC guide 71' in 2001. This process can be observed as one of the leading case which flexible and mutual making up approach enabled effective collaboration with civic and policy sectors.

Establishment of ISO/IEC guide 71 and subsequent activities in ISO/TC159 'Ergonomics'

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ISO/IEC Guide 71 was made public in 2001. After the establishment, activities to implement the principles of the Guide into individual standards have been led by ISO/TC159/Ad Hoc Group, then by ISO/TC159/WG2. This manuscript reviews the report of ISO/TC159/Ad Hoc Group and introduces the latest activities in ISO/TC159/WG2.

Age-related differences of muscle strength in upper and lower limbs of 1000 healthy Japanese

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Extremity joint torque values were measured in about 1,000 healthy Japanese men and women aged 20 to 79 years old to test the hypothesis that in Japan the young have less muscle strength than older Japanese. Maximal voluntary extremity joint torque values were obtained by isometric 'make' tests in the sagittal plane. The joint torque values obtained indicate that the young generations have less joint torque values than middle-aged person in Japan.

Anthropometric dimensions of older Malaysians: Towards designing an ergonomically friendly home environment for the elderly

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With a rapidly growing older population in Malaysia, there is thus an urgent need for a determining reference that meets the minimum requirements for designing an ergonomically friendly home environment for the elderly. There should be a comfortable, safe and satisfactory match between the artefact and the user, and this can be achieved if such data of the elderly is available. This study has successfully collected static anthropometric measurements of the Malaysian elderly. Its main objective was to develop an anthropometric database of older Malaysians in establishing a standard reference for senior housing design. This paper highlights the design implications for an elderly friendly home environment and the potential use of the anthropometric data. Thirty-nine anthropometric body dimensions were measured and recorded for 230 respondents aged 60 years and over in five locations (Kuala Lumpure, Shah Alam, Petaling Jaya, Ampang and Johor Bahru). Respondents are Malay, 129 males (56.1%) and 101 females (43.9%), with a mean age of 67 years. The mean, standard deviation, median, range, coefficients of variation and percentile values for the various body dimensions were calculated. With the use of the data, better home environments can be designed for older Malaysians in the population.

Effect of aging of hearing on speech recognition in rooms

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Word recognition tests with logatom and word lists, and sentence recognition test in simulated sound fields with noise and/or reverberation were carried out to assess the effect of hearing loss due to aging on speech communication in rooms. The result demonstrates that (ii) Speech recognition scores of elderly listeners are 25% lower than those of young adults for any kinds of speech test. This difference is equal to the 5dB increase of ambient noise for elderly listeners. (ii) Peripheral auditory functions are mainly affected by aging. On the other hand, central auditory processing functions of the aged show same performance as those of the young for the speech recognition task in this study. These results are expected to lead the discussion for speech communication in aged society and the standardization for assessing sound environment.