

K. Sagawa, K. Kurakata. *ISO standards for accessible design: Development of common basic standards*. *Gerontechnology* 2008; 7(2):202. Accessible design is an extension of design of products, services and environments to people with special requirements (i.e. older persons and persons with disabilities) to acquire a widest range of users. This concept was launched by ISO/IEC Guide 71 in 2001 and has spread widely into standards organizations. To follow up Guide 71, ISO Technical Committee, TC159 "Ergonomics", has been working for providing technical information necessary for realizing accessible design from an ergonomic point of view (ISO/TR22411 to be published). Currently, some of the contents are being standardized as common basic standards that are to be used horizontally across various design fields. In this paper, the activities in ISO/TC159 for accessible design will be reported with showing some of the common basic standards for accessible design. **Principle** Every product, service, and environment is composed of some basic design components; for example, a grip for ease of holding, visible buttons or switches for controlling, auditory signals for warning, visible letters and colour for instructions, and so on. If these components are well designed to meet the needs of older persons and persons with disabilities and if they are standardized separately for the use in every design field, it would facilitate the accessible design in industry as well as in our daily lives. Being based on these considerations, ISO/TC159 is now developing so-called 'common basic standards' for accessible design in order to promote accessible design in ISO and other standardization organizations. **Common basic standards** Common basic standards currently under discussion in TC159 (SC4 and SC5) are (i) tactile dots and bars, (ii) auditory signals, and (iii) age-related luminance contrast, all of which aim to provide a basic design method for respective design component that meet the sensory characteristics of older persons and persons with disabilities. Tactile dots and bars are required for identifying the locations of switches or keyboards for persons with visual disabilities as well as for persons whose eyes are occupied with other tasks. Aging effects on tactile sensitivity should be taken into account when we determine a height or length of tactile dots and bars suitable for older persons. In auditory signals, hearing sensitivity loss of older persons in the higher frequency region can also be taken into account when we design auditory signals audible for older users of electric appliances, such as irons or toasters, by referring to the hearing sensitivity of older persons. Similarly, visual sensitivity to short-wave light (blue light) decreases with age and this makes blue signs hard-to-see for older persons. It is required to develop a method for estimating the visibility and designing visual signs clearly visible to older persons. These design methods and considerations are being discussed for standardization in TC159. **Conclusion** The establishment of standards for accessible design is one of the methods in Gerontechnology to solve the various problems that older persons have in their daily lives. As a consequence of standardization, it is expected that relevant industrial sectors become aware of the importance of design for older persons. Guide 71, TR22411 and common basic standards will be a set of key technologies for promoting accessible design and Gerontechnology as well.

## References

1. ISO/IEC Guide 71: 2001 Guidelines for standard developers to address the needs of older persons and persons with disabilities.
2. ISO/TR22411: 2008 Ergonomic data and ergonomic guidelines for the application of ISO/IEC Guide 71 to products and services to address the needs of older persons and persons with disabilities

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