

**SYMPOSIUM 'FIFTEEN YEARS OF EVOLUTION OF GERONTECHNOLOGY'S CORE PHILOSOPHY'; CHAIR: KEN SAGAWA (JAPAN)**

*Developing the concept of gerontechnology - some historical views*  
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The topics of ageing and technology have risen to the global agenda during the last two decades. The first UN Assembly on Ageing was in Vienna in the year 1982, and the second in Madrid eventually in 2002. In the late 1980's some specific technologies to meet the needs of ageing persons, such as safety alarms, were developed, but it was felt that a wider concept should be created to cover all the issues from services and low tech devices to the most advanced and sophisticated high tech environment control systems. In Finland, for instance, we had a programme called Social Technology which fitted very well to the framework-Gerontechnology- of our Dutch colleagues. The First Conference on Gerontechnology in 1991 was the landmark. The concept, services

and products were jointly developed within COST, Co-operation in the Field of Science and Technology, within COST Action A 5, Ageing and Technology 1991-1996 together with 17 European countries. The European Union's 5th Framework Programme on Research 1997-2002 supported a key Action called The Ageing Population and Their Disabilities, which in a way continued the developments by giving new funding opportunities for research teams. However, there are still big challenges in bringing home the message on the needs of a world that is ageing to the agenda of the decision-makers and the enterprises.

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*The dynamic paradigm of gerontechnology*

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Some innovations in society from new technology via mass-produced products, services, and infrastructure are not beneficial to users whose experiences and desires differ from those of the developers. Gerontechnology addresses the dynamic interplay between technology and the

needs of the most rapidly growing population segment of ageing and aged adults ever more healthy and ambitious. The main concerns of gerontechnology are being considered as these have changed over time in the last 15 years.

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*The roles of gerontechnology in health and functioning*

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Gerontechnology's goals in the domain of health and self esteem are to prevent or delay age-related declines in functioning, and to compensate for such declines when they occur; goals paralleling the public health objectives of primary, secondary

and tertiary prevention. Other contemporary, health-related person/environment theories such as that in the US Surgeon General's 'Healthy People 2000' report are reinterpreted in the gerontechnology paradigm.

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*Gerontechnology in accessible design*

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It is now common consensus that all the products and environment should be accessible to all the people including older people and people with disabilities. To design the accessible products and environments, new technology and scientific knowledge on aging on human beings should be well coordinated. This is exactly the technical requirement for Gerontechnology. It seems that however both technology development and collecting scientific knowledge on aging

run independently. One reason for this is the lack of useful knowledge-base or database that might be used usefully and easily in the designing process. The developer of such human database should arrange it so that the designer can use them as concretely as possible in their products designing process. In this contribution, examples of database in human sensory functions are shown with methods how to use to meet the needs of older people.

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*Implication and practices of job redesign for the elderly workers*

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Japan's aging ratio over 65 years was 7.07% in 1970 and it is 19.8% in 2004. There has happened a very steep trend to the super-aged society. Retirement age of workers was 55 years old and it was changed to 60 now, But Japan has a big matter of shortage of pension payment resources and it has a plan to pay people their pension after 65 years old. One of Japan's strategies related to aging has been security of employment for the elderly

workers to survive until 65 years old connecting pension. For the problem solution of this, we have developed 'Job Redesign' of elderly workers' jobs and this is to redesign the workers' jobs utilizing their skill and diminishing their work load. This is the most powerful ergonomic means combined with Kaizen (continuous improvement) and this is very popular in the industrial field on the basis of 'Functional Age' paradigm.