

Business Session I - Session Keynote: Microelectronics Meets Medicine (m³): Electronic Systems for Diagnosis and Therapy

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Abstract

A comparison of practical achievements of microelectronics in the last 30 years to those of biotechnology proves a by far much higher contribution of microelectronic products to the emancipation of the individual man and the economics, than expected by the most daring molecular biological visions.

From the economic point of view there are to note the large value creation chain, high quality and number of jobs as well as the high innovation potential.

No modification in our life was so completely accomplished like this one by technology such as telephone, fax, radio, TV, GPS, and last but not least the PC world, apart from the numerous microprocessor systems hidden in consumer goods and traffic systems.

The demographic composition of today's population and the cost development in health service suggest to turn intensively towards the abilities of microelectronic techniques and systems in health service and to use them consequently. The cultural contribution of microelectronics can not be overlooked and, as indicated in the past, even high-priced systems became inexpensive, indeed cheap, consumer goods of daily life allowing access and use of these high-tech products also for not so wealthy social strata. Their advantage in use for health services is not limited to aged or handicapped people. The same systems serving to locate schoolchildren at non-open and dangerous school ways, for training control of sportsmen, health control of highrisk patients can, of course, also be used later for elder people, to give them more autonomy, while simultaneously minimizing risks and increasing quality.

Some examples will be illustrated in this presentation.

Biography



Bernhard Wolf is Professor, head of the Heinz-Nixdorf Chair for Medical Electronics and Director of Institute of Medical Engineering (IMETUM) Technical University of Munich, Germany. His research interests include the development of bioelectronic systems for biomedical diagnostics and therapy.