



ACADEMIA ENGELBERG

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2nd Dialogue “Science and Trust” by the Academia Engelberg **Pervasive Computing: Living in the world of invisible chips**

Thanks to the microprocessors in everyday objects, data exchange is becoming ever more complex and ever more difficult to control. Comprehensive informationization and networking is already technically possible. But what effects is this having on society? The complexity of these issues is the subject of the Second Conference of the Academia Engelberg from 15 to 17 October 2003 in Engelberg, Switzerland.

After a detailed analysis of the results that emerged from the first conference, the Board of Trustees of Academia Engelberg set the course for the future. The focus for the coming conferences will be increasingly on the promotion of trust between science and society with reference to a concrete theme. The emphasis here will not be on the technological aspects, but on the effects on social, ethical, economic and ecological developments. For the next two years the following themes have been chosen: This year, 2003, will be devoted to “Pervasive Computing”, i.e. the pervasion of our daily lives with microprocessors. In 2004, the focus will be on medicine, its progress and limitations.

University ties

In January 2003, an agreement was reached establishing close collaboration with the Swiss Federal College of Technology (ETH) Zürich. One manifestation of this is that the International Advisory Board (IAB) is being chaired by Prof. Dr. Ulrich W. Suter, Vice-President of Research and Business Relations and member of the management committee of the ETH Zürich. The IAB has the task of selecting the conference themes and determining the long-term strategic focus of the conferences. Apart from Prof. Dr. Ulrich W. Suter, the IAB currently has 12 other members with an international reputation in the fields of natural and social sciences, culture, business and politics.

From the passive computer to the interactive processor

Without people noticing, microprocessors are pervading our daily lives more and more. Vacuum cleaners, mobile phones, digital cameras, lifts and telecommunications devices all have mini-computers built into them which engage in independent exchange of information without any human instruction being necessary. The car alone has up to 60 computers in it to ensure that the fuel injection functions perfectly, the airbag is released at the right time, or the navigation system can find the right address.

Ethics and data protection as fields of conflict

This pervasion of everyday life with information systems along with the data processing that is ever-present in our lives is known as "Pervasive Computing". Radio-linked microprocessors which are built into objects of everyday use are capable of independently recording, processing and communicating data. In the mobile phone, for example, the location of the owner can be established at any time. But "Pervasive Computing" also give rise to problems: where are the limits of this omnipresent pervasiveness? In the car, this kind of support is useful and makes good sense, but pinpointing the location of a mobile phone enters the realm of control and is a massive infringement of privacy.

Conveying information, creating transparency

What appears technically quite feasible has huge social, ethical and legal implications. The Academia Engelberg aims to take up this theme with its international conference in October 2003. Based on developments in practice, about 130 personally invited representatives from science, business, society and politics will meet in Engelberg to exchange ideas on the core issues of the protection of privacy, data security, social changes and possible business applications, to deepen their mutual understanding and to elaborate a set of demands and projects. Based on the presentation of concrete examples and in the framework of workshops, the Academia Engelberg promotes dialogue on issues of the future, so that science and society can find common paths to cope with these issues in a positive way.

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