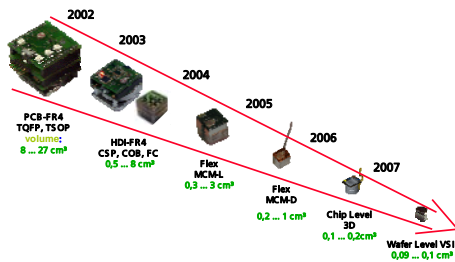


Press Release

June 2006

e Grain – Roadmap Miniaturization



Building Blocks for autarkic Microsystems			
System design	System integration techniques	RF-Frontend	Antenna
Assembly	Power supply	Operating system	Networking

e Grain: Building Blocks

Partners:

- Fraunhofer-Institut für Zuverlässigkeit und Mikrointegration IZM
- Technische Universität Berlin
 - Forschungsschwerpunkt Technologien der Mikroperipherik (FSP)
 - Institut für Telekommunikationssysteme
 - Telekommunikationsnetze (TKN)
 - Offene Kommunikationssysteme (OKS)
 - Institut für Hochfrequenztechnik und Halbleiter-Systemtechnologie
 - Mikrowellentechnik (MWT)
 - Antennen/EMV (ANT)
- Ferdinand-Braun-Institut für Höchstfrequenztechnik (FBH), Berlin

Contact:

Fraunhofer-Institut für Zuverlässigkeit und Mikrointegration IZM
M. Jürgen Wolf
 Gustav-Meyer-Allee 25
 D-13355 Berlin
 Telefon: +49 (0) 30 46403-606
 Telefax: +49 (0) 30 46403-123
 E-Mail: wolf@izm.fraunhofer.de

The “e Grain” Concept Building Blocks for Autonomous Sensor Networks

Today high volume data transmitting via the Internet, portable multiple-use devices or servers ensures that the information required is available - anywhere and at any time. The trend in electronic device development tends towards ever tinier, ever more complex and autonomous systems, which are wireless linked.

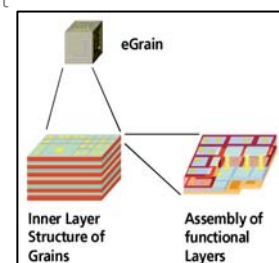
This results in highly miniaturization and is quickly advancing and driving 3D-integration techniques, low power devices (sensors, transceiver and DSP) and network architectures (protocols, OS etc.) and autonomous power supply (e.g. micro-batteries, micro fuel cell

Highly miniaturized sensor nodes linked in a local wireless network with access to global networks will succeed to be even more integrated parts of our daily live, at work as well as at home.

The project “Self-sufficient distributed microsystems – AVM” aims to investigate certain aspects and technologies for autonomous sensor systems as well as to develop technical solutions which will make a significant contribution to meeting the challenges.

The main application areas of wireless sensor nodes / networks in the future are:

- environmental screening
- quality control and management
- medical and health care
- security and safety
- human environment
- production management
- machine maintenance
- communication
- automotive
- consumer, sport



Project: Autarke verteilte Mikrosysteme (AVM)
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www.egrain.org