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MEMS – Successful Business Models and Differentiating Elements

With 14% CAGR expected over 2007-2012, MEMS (Silicon-based Micro-Electro-Mechanical Systems) is one of the fastest-growing areas of the (micro)electronic industry. MEMS enable lots of new applications in a variety of mass or specialty markets; furthermore they enable very substantial miniaturization of existing products at constant performances.

The penetration of MEMS is still modest, because the economic, technical and industrial laws associated with this technology are not widely known and understood, in contrast to traditional microelectronics. In many respects, these rules differ from those known from the IC industry. We present some of the specific and differentiating elements of the MEMS technology; and we will address some of the DOs and DON'Ts in order to industrialize MEMS-based products successfully.

Furthermore we will indicate ways towards reconciliation between (i) the immense diversity in functionality, price and performance requested from the market and (ii) the reduction in technical variety, a higher reactivity to the demand and an increased cost-efficiency, all of which are needed by the MEMS providers for competitiveness and profitability.