

# MEMS AN ALTERNATIVE FOR THE FUTURE

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**ABSTRACT:** This paper has presented the MEMS as an alternative for the future. MEMS technologies are complex and diverse, such as: Bulk micromachining, Surface micromachining, LIGA, Deep reactive ion etching, etc. MEMS applications are large and versatile from automotive, aerospace, medical device to satellite network communication, defence.

## 1. INTRODUCTION

Micro-Electro-Mechanical Systems (MEMS) represents the technology of very small parts, and interferes with Nano-Electro-Mechanical Systems (NEMS) and Nanotechnology at nano-scale. MEMS are building up from parts between  $1\mu\text{m}$  to  $100\mu\text{m}$  size, and MEMS devices range in size of  $20\mu\text{m}$  to a millimeter. In generally, they consist of a central unit that process data, the microprocessor and some components that interact with the outside such as microsensors [1,4,12].

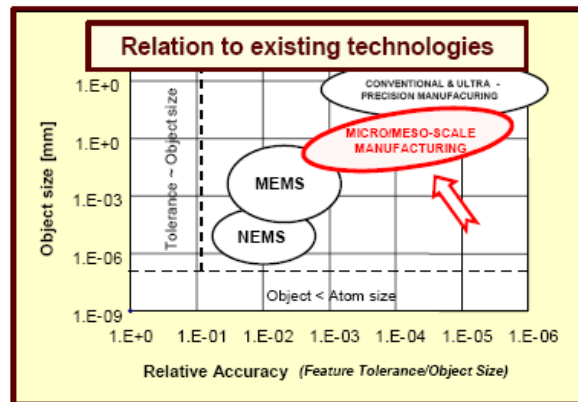


Fig.1. Micromanufacturing size/precision domain [4]

MEMS is an explosive technology of the world, represents an opportunity or a source of challenge for future human development. In this new world image the gravity and inertia don't mean so much, but atomic forces and surface science dominate where the silicon chip image with thousands of microscopic mirrors working in unison, enabling all optical network and removing the bottlenecks from the global telecommunications infrastructure [1-5 ,8-10].

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