

Recent Activities of the MEMS Industry Forum

1. Overview of Plans for MicroNano 2010

The micromachine exposition MicroNano 2010 will be held at Tokyo Big Sight on July 28–30, 2010. Having reached a consensus on the basic concepts and goals for MicroNano 2010, the Micromachine Center, which is sponsoring the event, and the organizer Mesago Messe Frankfurt Corporation are now working in concert on preparations for the event.

The turnout for MicroNano 2009 was heavily affected by the poor economic conditions, and the event experienced its first decline in recent years in the numbers of exhibitors and visitors. While the economic climate for fiscal year 2010 remains uncertain, we hope to regain the momentum toward growth seen in previous years.

In an effort to attract more exhibitors and visitors, in 2010 the Exhibition Micromachine/MEMS will be held concurrently with ROBOTECH, an exhibition on manufacturing technologies for service robots utilizing MEMS sensors (an exhibition on surface technology, SURTECH, will also be held concurrently). The MEMS Industry Forum (MIF) is also considering adding more concurrent events, such as a workshop on Nanoimprint Technologies and a workshop for our international affiliates.

The MIF is conducting promotional activities leading up to MicroNano 2010, including participation in the International Robot Exhibition and addressing robot MEMS in our MEMS workshops. We are also working on plans to enhance the MMC concierge service at the Exhibition Micromachine/MEMS, as well as to provide the most valuable technical information, business information, and business opportunities in one location for exhibitors and visitors. Please consider participating in MicroNano 2010 as an exhibitor or visitor. This event is not to be missed!

2. Networking International Affiliates

The MIF actively pursues collaboration with its international affiliates. In addition to transmitting information from Japan and collecting the latest technical information from around the world, information exchange with international affiliates is directly linked to the concept of “open innovation” embodied in the formation of the Tsukuba Innovation Arena Nano (TIA-Nano).

In October 2009, a second joint workshop with CEA-LETI of France was held at AIST Tsukuba, where both parties gained a deeper understanding of robot MEMS, sensor networks, and 3D integration. We are currently exploring the possibilities for continued collaboration with LETI.

Taiwan's Industrial Technology Research Institute (ITRI) became our 19th international affiliate on November 25. At the same time, we held a joint workshop at the University of Tokyo's Komaba Campus to cultivate a better understanding with the ITRI and explore the potential for future collaboration.

In addition to these workshops, the MIF shared information with the Berkeley Sensor & Actuator Center (BSAC) and the MEMS Industry Group (MIG) of the U.S. and IMEC of Belgium, and discussed possibilities for intercourse with Canada and the Netherlands. It is hoped that these activities will eventually lead

to business opportunities for the MMC's supporting members and contribute to the formation of TIA-NMEMS.



Workshop with LETI

ITRI signing

3. Study on a human resource development Program

While the economy is at a standstill due to the recession, there is no doubt that the MEMS industry will continue to grow in the long-term. With the market for MEMS expected to grow to some 2 trillion yen, the need to develop skilled personnel to accommodate this market scale has become urgent.

The MIF is studying a new education and training program in which the Micromachine Center would play a pivotal role. While personnel training projects have been conducted at AIST and at public institutes in northern Kyushu and the Kansai area, this program is aimed at expanding the training projects nationwide in the next fiscal year through a subsidy from the Kanto Bureau of Economy, Trade and Industry. Entitled “the Innovative Micro/nano Personnel Training Program” (provisional title), the program would restructure and reform the current curriculum, including the addition of new courses, and would be aimed at developing not only experts in fabrication processes and device design, but also personnel capable of bridging the gap between technological seeds and market needs to produce commercial products.

4. Formation of the Tsukuba Nano-tech Innovation Arena N-MEMS

Creation of the Tsukuba Nano-tech Innovation Arena N-MEMS is an endeavor aimed at the promotion of advanced research requiring a high capital investment that individual companies generally cannot afford and the enhancement of design and trial production capabilities needed for pioneering MEMS applications. The endeavor has been gaining momentum with the June establishment of an executive council and a series of workshops held through the support of METI. The Micromachine Center is studying a draft on a strategy and organization aimed primarily at forming N-MEMS.

The BEANS Project and the research organization for GMEMS (high-performance sensor networks and low environmental impact fabrication processes), which has been proposed for a supplementary budget or the budget for the next fiscal year, are in position to make of the core of N-MEMS. We will continue to propose strategies for using Japan's strengths to overcome our intense global competition and will conduct studies in cooperation with the Micromachine Center's supporting members on forming N-MEMS.