



MEMSCAP puts 200 robots on your finger

Dartmouth College tiniest robots manufactured by MEMSCAP MUMPs® services

Grenoble, France and Durham, North Carolina, June 5, 2006 – MEMSCAP (Euronext: MEMS), the leading provider of innovative solutions based on MEMS (micro-electro-mechanical systems) technology, today announces the successful manufacture of a fleet of the tiniest robots ever, through its MUMPs® program.

Using MUMPs® manufacturing and prototyping services, Dartmouth College researchers have realized a robot so small that 200 of them could fit on the tip of your finger. The tiny machine crawls like an inchworm across a grid at the breakneck speed of 200 microns per second. It is conceived to fix really little things such as pushing specks of dust, or other “dead” robots and can be precisely steered like a remote-control car to move in any direction across the surface of a special plate.

This tiniest robot of all is 250 by 60 microns (shorter than a human hair and shorter than a full stop at the end of a sentence) and proves to be fundamentally different from all the other robots: other miniature robots contain bulky motors, hinged joints, wheels and batteries. The Dartmouth robot is little more than a sliver of flexible silicon, two bits of memory, and two actuators that convert electrical energy into motion. It uses a computer to adjust electrical charges on the grid, thereby controlling its direction and speed. When the charge is increased, an actuator on the machine's tail becomes oppositely charged and thus attracted to the plate, causing the tail to flex and make contact with the grid's surface. This pushes the shorter front leg 10 nanometers forward. At its fastest, the robot can take 20,000 steps a second.

MUMPs®, which stands for Multi-User MEMS Processes service, is the ultimate platform for proof-of-concept fabrication. The longest running and most renowned multi-user program for MEMS manufacturing in the world, MUMPs® uses standard yet diversified process technologies that serve universities, laboratories, companies and researchers. Its versatile possibilities adapt to endless features, devices, and applications. The service's low cost allows researchers with the smallest budgets to realize their ideas.

It is believed these robots, who are expected to be able to repair circuitry in computer chips, could also fulfill, alone or within a team of robots, far more complex tasks such as fixing a PC. One cannot help dreaming about those fleets of robots fixing everything in the future, and even, why not...our body!

“The challenge of the best innovative ideas is to prove their feasibility” states Ron Wages, General Manager of MEMSCAP custom products business unit. “With MUMPs, we help our clients succeed in this crucial step”.

“MUMPs provides a unique capability to our laboratory to rapidly prototype microelectromechanical designs,” explains Dr. Bruce Donald, Joan and Edward Foley Professor of Computer Science, Chemistry, and Biology and head of the Robot Project. “In general, it is difficult to get access to sophisticated processing facilities that allow prototyping and product development, and MEMSCAP bridges that gap, allowing us to rapidly go from design to fab to working device.”

About MEMSCAP

MEMSCAP is the leading provider of innovative micro-electro-mechanical systems (MEMS)-based solutions. MEMSCAP standard and custom products and solutions include components, component designs (IP), manufacturing and related services. MEMSCAP customers include Fortune 500 businesses, major research institutes and universities. The company's shares are traded on the Eurolist of Euronext Paris S.A (ISIN: FR0010298620-MEMS), where MEMSCAP belongs to the Next Economy segment. More information on the company's products and services can be obtained at www.memscap.com.

For more information contact:

Aurore Foulon
Vice-President, Corporate Communications
MEMSCAP
Tel. : +33 (0)4 76 92 85 00
aurore.foulon@memscap.com

Busbee Hardy
MUMPs Marketing Manager
MEMSCAP
Tel: +1 919-314-2235
buzz.hardy@memscapinc.com

About Dartmouth College

Dartmouth, a member of the Ivy League, is a private, four-year, coeducational undergraduate college with graduate schools of business, engineering and medicine and 18 graduate programs in the arts and sciences. Dartmouth is the nation's ninth-oldest college, founded in 1769 by Rev. Eleazar Wheelock for the education of "youth of the Indian Tribes ... English Youth and others ...". The professional schools, among the first established in their respective fields, have had a historic role in defining the school's intellectual values. Dartmouth encourages a love of learning and discovery in every member of its community. It celebrates the diversity of that community, which includes men and women from different backgrounds, abilities, economic circumstances, perspectives, races, religions, national origins, and sexual orientations. Contact us at <http://www.dartmouth.edu/>

About MUMPs®

The Multi User MEMS Processes, or MUMPs®, is the longest-running MEMS prototyping service in the industry, and the defacto standard process to support academic, government, and industrial research in MEMS. Fabricated out of the Research Triangle Park, North Carolina facility for fourteen years, the MUMPs® prototyping service has been operated by listed company MEMSCAP since November 2002. Originally developed as part of a MEMS infrastructure program, MUMPs has expanded over the years from one to four distinct multiple mask-level processes, adding thick metal, SOI, and CMOS-MEMS process to the polysilicon surface micromachining process. Nearly half a million MEMS devices have been shipped to over 1000 customers over the life of the MUMPs program.