Micromem Technologies Inc. Provides Update

The Associated Press

/FROM PR NEWSWIRE DALLAS 888-776-3971/ [STK] CanadaTQS:MRM NASDAQ-OTCBB:MMTIF [IN] CPR OTC [SU] TO NEWS EDITORS: Micromem Technologies Inc. Provides Update TORONTO AND NEW YORK, Oct. 15, 2012 /PRNewswire/ - Micromem Technologies Inc. (the "Company") (CNSX: MRM, OTCBB: MMTIF) through its wholly owned subsidiary, Micromem Applied Sensor Technologies Inc.

(MAST), is pleased to provide an update on current and new initiatives. Also, please visit our website to read the CEO's Letter to the Shareholders dated October 5, 2012.

GSI Westwind As reported in our press release dated October 1, 2012, MAST is now proceeding with routine production of the Hall Sensor Speed Control Circuit. First delivery is expected for November 2012.

Our foundry partner, Global Communication Semiconductor (GCS) has been advised to begin wafer production to support the anticipated Hall sensor volume requirements. Quik Pak, our packaging partner, has designed the volume-manufacturing package for our sensors.

International Oil Company As a result of successful completion of the first phase the client has now expanded our scope of work to include measurement for the actual concentration of magnetic particles in the oil stream versus only a detection of their presence. MAST has submitted a provisional patent to cover some unique and innovative technology that involves use of resonance wave technology and measurement of particle fluorescence. This new technology builds upon our ability to "steer" the magnetic particles toward our sensor platform and overcomes the issues that others have had to this point with the use of fluorescence in an opaque oil stream. We are on schedule to deliver the new field devices for testing and evaluation by end of 2012. After receipt of successful results we have been advised that the ultimate order will be in excess of 10,000 field units.

American Automobile Manufacturer MAST successfully demonstrated our ability to detect variations in an automotive oil pan using oil levels of less than 1mm, including compensation for oil temperature and inclination of the vehicle. This was performed with an additional MEMS structure on our oil condition sensor platform. MAST has also demonstrated our ability to inductively scavenge power from the vehicle and wirelessly communicate the oil pan level to the vehicle computer well after the vehicle power has been shut off. We are now entering the next phase of this project, which involves a custom MEMS chip design that will reside fully within the confines of the automotive oil pan plug.

U.S. Department Of Defense (DoD) and the Terrorist Support Working Group (TSWG) We have been advised by the U.S. Department of Defence that the status of our

bids are as follows: -- Forward-Looking Surface Penetrating Sensor Fusion of Combined Sonar/Radar for Disturbed Ground; Designed for IED detection, this forward-looking sensor-fused phased-array radar/sonar provides multi-modal detection of disturbed ground: Has been approved and will now move to approval for funding.

-- Rotationally Invariant Temporal Bayesian Classifier for Wide-Area Target Tracking: Has not been approved.

-- Multi-Layer Temporal Bayesian Classifier for Wide-Area Motion Imagery: Has not been approved.

Monitoring of Large Scale Power Line Deflection A large national power line company has requested a prototype of a device capable of measuring and remotely reporting the deflection of power cables used in the transmission of electricity through a national network of power lines. We have provided testing data indicating that we can successfully and repeatedly measure to an accuracy of better than 10 centimetres sag in large high power transmission lines and we are scheduled to demonstrate our technology at the client's facility in October 2012. The results exceeded the client's requirement and specifications. MAST has also supplied costing and delivery timetables for this project.

Sensor Technology and Methods for Measuring Cement Integrity A second Fortune 100 global oil production company is seeking sensor technology and methods to permit direct assessment of the integrity of cement used in well drilling. MAST proposed to embed literally millions of nanoparticle-sized sensors in the concrete that are capable of scavenging power from the environment and communicating via RF inductive energy. Discussions are directly with the company and MAST expects approval for this project in November 2012. As a result of a review of our technology, MAST has been added to the Deepwater Horizon Consortium Initiative, which will allow for MAST's input into design requirements.

Technology for Sensing Wide-Range Magnetic Flux Density A second multi-billion dollar automotive manufacturer is looking for technology for sensing wide-range magnetic flux density, which is time varying inside the drive motor. Their interest is for sensors that can be inserted into a narrow gap within the motor, similar to the application utilized by GSI Westwind. The submitted proposal is pending approval by client.

High Precision 3-D Position Detection within the Human Body A major global manufacturer is seeking technology for high-precision, real time and wireless detection of the three-dimensional position of the tip of a catheter within the human body. MAST has submitted a proposal and is currently awaiting approval for this project by the client.

Ultra Small Electronic-Scanning Ultrasonic Transducer for High Resolution Imaging A major medical equipment manufacturer is looking for technology to create high-density arrays of ultra small electronic scanning ultrasonic transducers. These transducers will be incorporated onto cylindrical medical devices to enable high-

resolution imaging. MAST proposes to place its technology on the end of the client's catheter. This technology will allow greater visibility to the surgeon. This project is pending approval by client.

Volume Production of MAST Hall Sensors MAST's Hall Sensor is currently undergoing testing and evaluation by a client. The client has validated that our technology can maintain linearity in a magnetic field up to 2.5 Tesla. Our technology has undergone head to head tests by this client with other technologies and the client has reported back that our Hall sensor was the winner in all four of the first tests. Final testing is scheduled to be completed in 2012. If we are successful in winning this order, we can begin high volume manufacturing in early 2013 in custom packaging for integration into the client's application. This project does not require MAST to do any development and will be handled as routine production of our standard Hall sensor.

Miniature Current Sensing Device MAST submitted a proposal to an international client to design and build a miniature electric current sensor device. The objective is to detect a current in very small wires in a dense wiring environment. This device will be MEMS based and incorporates a wireless chip capable of communicating to external data collection services. Our proposal was selected for final negotiations, a Non-Disclosure Agreement ("NDA") has been signed with the client and discussions have begun.

Wireless Power Transfer Device MAST submitted a proposal to a client interested in providing wireless power solutions for residential use.

Our proposal is now on the short list and discussions have begun under NDA.

Ability to Weigh Extremely Small Quantities in a Production Environment MAST has successfully demonstrated the ability to measure very small weights down to the molecular level to a global client. Our patented technology involves a vibrating MEMS structure that interacts with individual molecules of the compound being tested. The application will involve multiple routine and continuous measurements in a production environment. Discussions are proceeding under NDA.

Remote Monitoring of Elderly Home Care Patients MAST has submitted a proposal for technology that will provide the ability to garner health information from elderly home care patients through routine monitoring at home. MAST is currently designing an in-home device that the home care patient would simply touch. Through that touch the device will be able to provide information on the patient's health. Through contact with the patient's skin the device, a nanostructure initiator mass spectrometer chip, can provide information such as microbial and chemical exposure to toxic substances, track stress, addiction, disease recovery and dietary changes. It would also be designed to monitor the efficiency of antibiotics or antibacterial agents. This project is currently under NDA and technical discussions on specific performance requirements are scheduled to begin in November, 2012.

Stable Hydrocarbon Sensor for use in Automotive Exhaust MAST has submitted a proposal to a third global automotive company to develop a stable hydrocarbon

sensor for use in automotive exhaust. Our technology would be used to measure vibration and rotation modes of hydrocarbon bonds, enabling accurate detection of low concentrations of hydrocarbons in exhaust. A provisional patent has been prepared as this innovative design is based upon quantum entanglement. MAST is currently awaiting NDA execution to proceed.

Early Breast Cancer Awareness Device Micromem has executed a Memorandum of Understanding ("MOU") with a European company to assess the requirements for the beginning of clinical trials in Europe and presentation of Micromem's patented device at an upcoming medical conference. Discussions have already begun to assess any design changes and all requirements to meet the criteria for clinical trials and eventual marketing in Europe.

Aerial Magnetic Exploration Platform MAST is negotiating with a firm that will productize our magnetic aerial exploration platform. Our measurement platform is scheduled to incorporate the world's most sensitive sensor front end in the form of a SERF Magnetometer. A differential measurement will allow measurement sensitivity of better than 1 pT/root Hz. Commercialization is expected to be complete in 2013. Negotiations continue with a third party who is planning to license and distribute this device.

Tools to Characterize Sub-Micron Particles in Complex Mixtures MAST was not selected.

Innovative Biometric Applications for Smart Phones MAST was not selected.

Compact Power Quality Measurement Devices This project was not awarded to any bidder.

About Micromem and MASTInc MASTInc is a wholly owned U.S.-based subsidiary of Micromem Technologies Inc., a publicly traded (OTC BB: MMTIF, CNSX: MRM) company. MASTInc responsibly analyzes the specific industry sectors to create intelligent game-changing applications that address unmet market needs. By leveraging its expertise and experience with sophisticated magnetic sensor applications, MASTInc successfully powers the development and implementation of innovative solutions for healthcare/biomedical, natural resource exploration, government, information technology, manufacturing, and other industries. Visit www.micromeminc.comwww.mastinc.com [1].

Safe Harbor Statement This press release contains forward-looking statements. Such forward-looking statements are subject to a number of risks, assumptions and uncertainties that could cause the Company's actual results to differ materially from those projected in such forward-looking statements. In particular, factors that could cause actual results to differ materially from those in forward looking statements include: our inability to obtain additional financing on acceptable terms; risk that our products and services will not gain widespread market acceptance; continued consumer adoption of digital technology; inability to compete with others who provide comparable products; the failure of our technology; the infringement of our technology with proprietary rights of third parties; inability to respond to consumer

and technological demands; inability to replace significant customers; seasonal nature of our business; and other risks detailed in our filings with the Securities and Exchange Commission. Forward-looking statements speak only as of the date made and are not guarantees of future performance. We undertake no obligation to publicly update or revise any forward-looking statements. When used in this document, the words "believe," "expect," "anticipate," "estimate," "project," "plan," "should," "intend," "may," "will," "would," "potential," and similar expressions may be used to identify forward-looking statements.

The CNSX or any other securities regulatory authority has not reviewed and does not accept responsibility for the adequacy or accuracy of this press release that has been prepared by management.

Listing: NASD OTC-Bulletin Board - Symbol: MMTIF CNSX - Symbol: MRM Shares issued: 130,701,175 SEC File No: 0-26005 SOURCE Micromem Technologies Inc.

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