



FOR IMMEDIATE RELEASE

April 2, 2012

Micromem Technologies Inc. Provides an Update on Current Business Initiatives

Toronto, New York, April 2, 2012: Micromem Technologies Inc. (the “Company”) (CNSX: MRM, OTCBB: MMTIF) provides a detailed update on current business initiatives. The following pipeline of close in work represents the culmination of three years of effort to transition the company from a research and development fabless semiconductor house focused on MRAM development, to a provider of intellectual property rich nanotechnology solutions that involve fusion of many sensors. These solutions are focused on difficult client business problems that require solutions that are not readily found elsewhere in the market. The Company’s business plan targets the following:

- The world’s major markets, i.e. medical devices, commercial electronic products, natural resource exploration and national security are all moving to the solutions that incorporate use of nanotechnology sensors, embedded software, power scavenged from the environment and pervasive deployment of hundreds of millions of these very small devices.
- This transition while lengthy in nature, leveraged our domain expertise and positions the company to experience now rapid revenue growth in our target markets

The following update represents our current efforts on revenue generation and illustrates the complexity of our domain expertise and intellectual property base, and, most importantly, market leading top-tier global companies are now drawing upon our technology.

International Oil Company

Micromem has completed the beta version milestone by having successfully demonstrated to our client our ability to detect the presence of magnetic nanoparticles 20 nanometers in diameter at 1 ppb concentration in an oil stream. The developed product is capable of taking samples as small as 50 microliters and our patent pending detection methodology can reliably sense 5 nanograms of these particles. This is our first application of this technology.

Our development work on this project discovered a second methodology for detecting functionalized magnetic particles using a patent pending resonant wave technology, which is also the first time a fluorescent technology can be incorporated in an oil stream that requires zero transmission of the light source through the sample. The technology will be marketed in the oil industry and environmental markets.

The Company will be meeting with the client in April, to deliver the pre-manufacturing form factor, thus completing its contractual obligation to date. This triggers a payment against the development contract and creates the specifications for the field device. The Company anticipates securing the next phase, which represents a production quality order and triggers a large-scale field-testing initiative.

GSI Westwind

GSI Westwind has released to Micromem the results of the final series of evaluation tests utilizing independent parameters. The boards were fully tested by the client at high operating speeds and integrated into their product line. The prototype is currently undergoing production design that will define the actual deliverable. Once this has been approved by GSI Westwind the Company expects to be in a position where it can deliver commercial product purchased by the client for use in their product. Micromem will be able to deliver within 6 weeks of approval and thereby begin a revenue stream derived from production sales. Micromem does not anticipate any design issues impeding the order.

This marks the completion of the development contract where Micromem will receive the 3rd and final payment for the development agreement and take us to the commercial sales portion of this new product.

American Automobile Manufacturer:

Micromem is pleased to announce that it has completed negotiations and is currently awaiting the execution of an Advanced Design Letter, in essence a development contract, to build a proof of concept with a major American automobile manufacturer. The product development is focused on embedding a fusion of nano-sized sensors in the oil plug of an automobile's oil pan designed to analytically evaluate in real time the chemical constituents of the engine oil. Micromem has had this technology under development for the last three years and has requested authorization to release specifics and the name of the corporation requesting the proof of concept.

U.S. Department Of Defense (DoD) and the Terrorist Support Working Group (TSWG)

Micromem has been requested by the U.S. Department of Defense to attend the Electromagnetic Environment Conference. The Company will be attending this conference April 2-5 to further discuss the following three proposals recently submitted by the Company:

- ***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.
- ***Rotationally Invariant Temporal Bayesian Classifier for Wide-Area Target Tracking***
 - Temporal classification and ballistics provide major cues for target tracking. Tracking tasks become routine when temporal predictor models correlate motion-based tracking.
 - Track vehicles, dismounts and animals through urban environments with model-based predictor HMM characteristics
- ***Multi-Layer Temporal Bayesian Classifier for Wide-Area Motion Imagery***
 - Temporal classification and ballistics provide major cues for human activity classification. Temporal predictor models correlate motion to object types, discriminating between classes of activity.
 - Classify human activity including vehicles, dismounts through urban environments with model-based predictor HMM characteristics.

NineSigma Requested Proposals

NineSigma is the most experienced and advanced Open Innovation service provider in the world. Founded in 2000, NineSigma has been offering open innovation solutions long before it was an accepted management practice.

Joe Fuda, CEO of Micromem stated, "Our relationship with NineSigma has been excellent. Their business model allows for small companies like us to have a global stage to present our innovative product designs to major world-leading companies. Without the services of NineSigma it would be difficult, time consuming and costly for Micromem to establish relationships with leading companies who are looking for unique technology solutions."

Based on the Company's patented technology and a focus on its core competencies, Micromem has submitted ten technical business proposals to NineSigma and has had follow-up discussions under NDA with several of their clients. The Company's proposals are currently undergoing a commercial viability review or have advanced to the contract review and or execution stage. These will be made public at our earliest opportunity. Summaries of our key business initiatives are:

- ***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. Micromem's recent press release illustrated the exact fit of our technology to this particular request.

- ***Tools to Characterize Sub-micron Particles in Complex Mixtures***

A global materials company is looking for technologies and validated methods of high throughput detection and quantitative analysis of sub micron particles in complex formulations.

- ***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. Micromem 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 have been directly with the company.

- ***Innovative Biometric Applications for Smartphones***

A multi-billion dollar high-tech manufacturer is seeking innovative biometric authentication that can be integrated into smart phones without compromising the intuitive usability.

- ***High Precision 3-D Position Detection with 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.

- ***Ultra Small Electronic-Scanning Ultrasonic Transducer for High Resolution Imaging***

A major medical equipment manufacturer is looking for technology for creating high-density arrays of ultra small electronic scanning ultrasonic transducers. These transducers will be incorporated onto cylindrical medical devices to enable high-resolution imaging. Micromem proposes to place our technology on the end of the client's catheter. This technology will allow greater visibility to the surgeon.

- ***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. Micromem's proposal is now under contract negotiation as our technology was selected as the solution that the buyer felt had the best chance of working.

- ***Compact Power Quality Measurement Devices***

A multi billion-dollar utilities company is seeking technology for a portable easy to connect compact power quality measurement system. Our technology enables remote, low power operation at sites with limited or no conventional telemetry, enabling remote data acquisition at sites that would otherwise be difficult to instrument. We convert our signals to digital form at the earliest stage to minimize noise introduction and maximize signal quality. Our system has a complete telemetry infrastructure, enabling continuous 24/7 monitoring from a central Internet cloud location of vast numbers of power line monitors.

Micromem is justifiably proud of the pipeline of developments it has built over the last year. We are now dealing with world class companies that take the technology and the capabilities of our sensor platform very seriously. This has been the result of time consuming development work, testing and independent verification of our technology by credible and competent engineering firms. To be able to bid and potentially win development contracts using our patented technology as its core has proven out our design work and our business model. A methodical approach to proving out our technology has given Micromem and MAST an audience with the world's most industry savvy companies who are now funding these initiatives.

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.com www.mastinc.com.

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.

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