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NEWS RELEASE

POET Technologies Adds Key Staff and Files Strategic Patent Applications for POET-Based Quantum Computing

Toronto, ON, and Storrs, CT, March 31, 2014 – POET Technologies Inc. (TSX-V: PTK; OTCQX: POETF) (“the Company”), the developer of the planar opto-electronic technology (POET) platform for monolithic fabrication of integrated circuit devices containing both electronic and optical elements on a single semiconductor wafer, today announced an addition to its key staff and a rapid expansion of intellectual property (IP) assets. The Company has filed new IP portfolio protection documents with the U.S. Patent and Trademark office (USPTO) and in other key jurisdictions to support strategic applications in POET-based quantum computing.

POET Expands Laboratory Staff

The Company is pleased to announce that Mr. Daniel DeSimone is joining the staff at the POET laboratories as Vice President, Product Development.

Mr. DeSimone was most recently Senior Manager, Test and Wafer Sort Engineering, at Fairchild Semiconductor. Under his leadership, the Fairchild team achieved significant increases in quality and yield during wafer production in several 0.5 and 0.35 micron CMOS/BiCMOS/BiPolar technologies. In addition to manufacturing experience, Mr DeSimone brings to the Company two distinct experiences:

- strategic product roadmap definition - addressing server and storage vertical markets; and
- broad integrated circuit development encompassing analog mixed signal through large digital application specific integrated circuits.

Mr. Peter Copetti, Executive Chairman and interim CEO, noted, “Over the last few months, the Company has moved dramatically from proof-of-principle through:

- lab device demonstration;
- full third-party validation with a commercial foundry; and
- working with select potential partners on technical design kits.

We are entering a new parallel stage – increasing quality and design robustness for manufacturability as part of commercialization of our game changing IP – and Mr. DeSimone’s combined experience is exactly what we need to assist the team in moving to the next level.”

POET-Based Quantum Computing IP

The Company is also announcing a key expansion of its IP asset base. The Company already has a large inventory of key and ancillary patents protecting its unique platform for monolithic fabrication of integrated circuit devices containing both electronic and optical elements on a single semiconductor wafer. Details of the existing portfolio are available through USPTO.

In addition to this portfolio, the Company recently filed for protection a number of new IP classes with USPTO, as well as in Canada, Japan, Korea, and other key jurisdictions.

“The commercialization process of the Company’s POET platform has historically yielded intellectual assets with future commercial development potential meriting IP protection,” said Mr. Copetti. “While the Company has focused assets and effort on near-term commercialization goals, our labs are generating future IP as well.”

The new portfolio includes:

- Closed Loop Rectangular Resonators in POET & Thyristor Memory
(OPE-069; 14/238,649; PCT/US12/51265; EPO 12824167.6)
- Fiber Optic Coupling Array
(OPE-070; 14/104,230; PCT/US13/74658)
- Quantum Dot Lasers in POET for 1310-1550 nm Operation
(OPE-072; 13/921,311)
- Universal Memory Cell in POET for DRAM, SRAM and NVRAM Applications
(OPE-073; 13/951,578)
- IR Imaging Structures in POET based on Quantum Dot Epitaxy
(OPE-074; 14/023,525)
- Whispering Gallery Mode Resonators in the Planar OptoElectronic Technology; and
Implementation of 1550 nm Optoelectronics in the Planar OptoElectronic Technology
(OPE-075; PROV 61/962,303; 14/222,841)

Mr. Copetti added, “In this latest round of patent applications, the Company has filed patent protection for IP that, in the medium-to-long-term, supports theoretical quantum computing applications, such as the fabrication of quantum dot-based spin qubits and the devices needed to read and write them on the same die. With POET integrated opto-electronics, we are already ahead of the curve, and we want to stay that way.”

A qubit – also known as a quantum bit – is a unit of information in quantum computing. It is the quantum analogue of a bit in a classical computing system, which would have to be in one of two states. Quantum mechanics allows a qubit to be in a superposition of both states at the same time, a property which is fundamental to quantum computing. The new patent applications are for medium-to-long-term strategic positioning, and they are complementary to the core POET intellectual assets.

About POET Technologies Inc.

POET Technologies is the developer of the POET platform for monolithic fabrication of integrated circuit devices containing both electronic and optical elements on a single semiconductor wafer. With head office in Toronto, Ontario, Canada, and operations in Storrs, CT, the Company, through ODIS Inc., a U.S. company, designs III-V semiconductor devices for military, industrial and commercial applications, including infrared sensor arrays and ultra-low-power random access memory. The Company has several issued and pending patents for the POET process, with potential high speed and power-efficient applications in devices such as servers, tablet computers and smartphones. The Company’s common shares trade on the TSX Venture Exchange under the symbol “PTK” and on the OTCQX under the symbol “POETF”. For more information please visit our websites at www.poet-technologies.com.

ON BEHALF OF THE BOARD OF DIRECTORS



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- *“While the Company has focused assets and effort on near-term commercialization goals, our labs are generating future IP as well.”*

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