



**Scientific Solutions, Inc.**

**Press Release**

## **Scientific Solutions, Inc. Wins Phase II SBIR Award for Next Generation WDM Components**

N. Chelmsford, Massachusetts; October 3, 2002 – Scientific Solutions, Inc. (SSI) announced today that it has been awarded a Phase II Small Business Innovation Research (SBIR) award by the Department of Energy (DOE) for the "Development of a Suite of Ultra-Dense WDM Components Using Novel Liquid Crystal Technology". The award represents a total of \$598,772.00 U.S., distributed over a two-year period.

This project seamlessly follows on groundwork laid forth during the prerequisite Phase I, in which SSI's proprietary Liquid Crystal Fabry-Perot (LCFP) tunable filters were configured as a proof-of-concept 2x2 all-optical cross switch, the establishment of multiple independently tunable filters on a single substrate was demonstrated, and the ability to perform synchronous electronic wavelength tuning of multiple LCFP etalons was proven. In Phase II, SSI will further develop, design, fabricate, and prepare for market a set of solid-state, random access, all-optical cross-switches that are tunable over a wide range of wavelengths and capable of resolving 64, 200, and 1761 channels in the ITU defined C-band (centered on 1550 nm). If successful, these devices will offer unprecedented channel discrimination capability in telecommunication bands, with up to 1761 DWDM channels able to be supported in a single fiber-optic trunk. The devices may be used as pure optical switches, tunable add/drop modules, multiplex/demultiplex devices, and other dynamically reconfigurable DWDM system components. Responding to the increasing demand of burgeoning optical networks, SSI's devices will significantly enhance the capacity, speed, security, and reliability of long-haul, metropolitan, and local area information networks. SSI feels its technology offers marked advantages over gratings, acousto-optical filters, MEMS, and piezo-electric devices at a fraction of the cost.

First established in 1982, the SBIR Program reserves a portion of a Federal agency's research or research and development effort for award to small businesses through a uniform three-phase process in which strong emphasis is placed on the ultimate pursuit of commercial applications of SBIR results. The program provides increased opportunities for small businesses to participate in R&D, increase employment, and improve U.S. competitiveness.

The DOE is one of ten Federal agencies that currently participate in the SBIR program, funding approximately 200 Phase I and 85 Phase II projects per year. In the annual SBIR competition, successful award ratios for DOE applicants have been about 20% for Phase I and 45% for Phase II. The DOE selects for award only those grant applicants that have demonstrated very high overall merit within their technical subject area.

Scientific Solutions, Inc., a small business located in North Chelmsford, Massachusetts, was established in 1995 to provide new frequency-agile solutions to spectroscopic systems. In addition to their LCFP tunable filters, SSI develops optical cross-switches, holographic circle-to-point converters, and switchable circle-to-point converters, primarily for use in WDM applications. Historically, SSI has been an active participant in the SBIR program. At this strategic time, SSI is seeking one or more strategic partners, especially one with expertise in micromanufacturing. SSI formally expresses its gratitude to the Department of Energy for its continued support.

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