



LIGHTWAVE LOGIC™

## **Lightwave Logic's Terry Turpin Projects Billion-Fold Performance Improvement of Spatial Light Modulators Using Organic Nonlinear Materials**

***Replacing Existing Liquid Crystal Technology with Organic Nonlinear Polymers Can Eliminate the Major Impediment to the Progress of Optical Computing***

NEWARK, Delaware, February 7, 2012/PRNewswire/ -- Lightwave Logic, Inc. (OTC Bulletin Board: [LWLG.OB](http://www.lwlgob.com)), is a technology company focused on the development of a *Next Generation Non Linear Optical Polymer Materials and Devices* for applications in high speed fiber-optic data communications and optical computing.

In a conference call with shareholders on January 25, 2012, Terry Turpin, Lightwave Logic's Optical Computing Expert detailed the advantages of a Spatial Light Modulator (SLM) currently in development by the company with the help of an outside contractor using one of the company's organic nonlinear polymer based materials.

A spatial light modulator is a device that formats information for an optical computer and is essentially an erasable photographic film that can be used and erased extremely quickly to record and images. A Spatial Light Modulator can be considered the *heart* of an optical computer in the way that a CPU is the core of a digital computer.

Mr. Turpin characterized this as the *Holy Grail* of Optical Computing because essentially all machine intelligence applications like, facial recognition; pattern recognition and speech recognition are based on Spatial Light Modulators and currently have been limited by the slow response time of LCD technology.

According to Mr. Turpin, a recognized expert in optical computing for over 40-years including important work at Essex Corporation and the National Security Agency (NSA), "The progress of Optical Computing has been limited by legacy Liquid Crystal Display (LCD) technology which while effective, can only refresh at 10 to 30 millisecond intervals. Because of the extremely fast response time of Lightwave Logic's organic nonlinear optical materials are in the range of a picoseconds (one-billionth of a second versus LCD at 10 to 30-thousands of a second), improvement in performance could be a billion-fold."



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Jim Marcelli, CEO of Lightwave Logic commented, “We are very excited by our Spatial Light Modulator development program and feel fortunate to have the experienced hand of Terry Turpin on this project.

We have been working on the basic design that will incorporate one of our Perkinamine™ based organic nonlinear polymer materials. Obviously, this is a huge opportunity for Lightwave Logic and attaining anything near the performance improvements that Terry has talked about will have a huge impact on Optical Computing in general and will actually give birth to markets for products that have been waiting for a solution to today’s current speed limitations. We know for a fact that this will be of extreme interest to the military and commercial partners as well. Upon completion of a working prototype, we will be actively looking for partnering opportunities.”

### “Powered by Lightwave Logic”

Lightwave Logic, Inc. is a development stage company that is producing prototype electro-optic demonstration devices and is moving toward commercialization of its high-activity, high-stability organic polymers for applications in electro-optical device markets. Electro-optical devices convert data from electric signals into optical signals for use in high-speed fiber-optic telecommunications systems and optical computers. Please visit the Company's website, [www.lightwavelogic.com](http://www.lightwavelogic.com) for more information.

### ***Safe Harbor Statement***

*The information posted in this release may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. You can identify these statements by use of the words "may," "will," "should," "plans," "explores," "expects," "anticipates," "continue," "estimate," "project," "intend," and similar expressions. Forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected or anticipated. These risks and uncertainties include, but are not limited to, general economic and business conditions, effects of continued geopolitical unrest and regional conflicts, competition, changes in technology and methods of marketing, delays in completing various engineering and manufacturing programs, changes in customer order patterns, changes in product mix, continued success in technological advances and delivering technological innovations, shortages in components, production delays due to performance quality issues with outsourced components, and various other factors beyond the Company's control.*

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