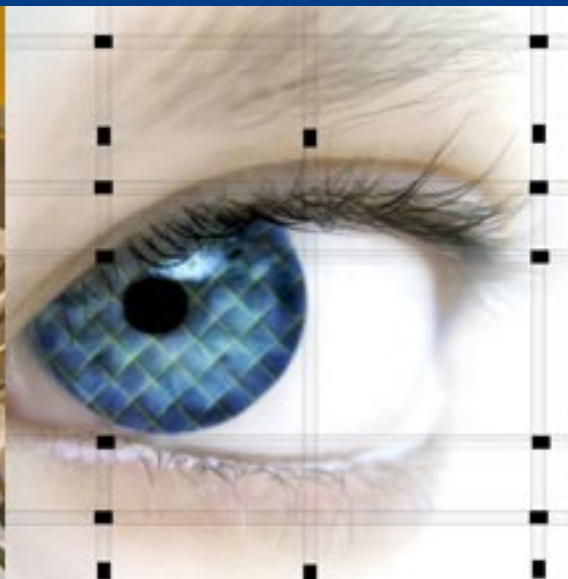


JULY 2009

21 VENTURES NEWSLETTER - Q2



GREETINGS EVERYONE.

According to a recent study by Deloitte and the National Venture Capital Association, 63 percent of venture capitalists expect to increase their investments over the next three years. The study asserts that advances in new technology, growing consumer demand in alternative energy and the ambitious plans of governments worldwide to invest in clean technologies have made this sector a key focus for the venture community.

Here at 21Ventures we are poised for this surge in the clean tech space. Our focus is on wind, solar, water, energy storage, efficiency and agriculture. In these focus areas 21Ventures is a virtual incubator providing shared resources such as grant writing, technical consulting and web based marketing services provided through its affiliate, Expansion Media.

The virtual incubator sponsored by 21Ventures provides an ideal framework for companies competing in an ever evolving, global marketplace.

21Ventures is excited to present this newsletter highlighting some of the latest developments in our growing portfolio.

Regards,

David Anthony

David Anthony



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AirDye® eliminates the use of water at the point of coloration and the need to subsequently wash and dry fabrics

AIRDYE® TECHNOLOGY & THE LIFE CYCLE ASSESSMENT

Textile production manufacturing has a major impact on ecological degradation, producing millions of gallons of wastewater annually, while utilizing massive amount of energy resulting in high greenhouse gas emissions output. Yet, in the last 30 years, this industry has taken few steps other than the integration of some sustainable fabrics to reduce its footprint.

Outside of Los Angeles, **Colorep®** has developed a technology to eliminate nearly all water used in the textile dyeing and printing process. The technology's name, **AirDye®**, nearly explains the concept itself. **AirDye®** technology is in fact a new air-based technique for synthetic textile dyeing and decoration which revolves around the controlled movement of dyes in textiles and other polymer materials.

Using the proprietary **AirDye®** process, textile manufacturers now have the ability to color fabrics in ways current methods prohibit. Whereas traditional procedures for creating two-sided fabrics involve the sewing or laminating of two different pieces of fabric together; incorporation of **AirDye®** technology requires only a single piece, each side with a different color or decorative pattern and printed without harming the integrity of the fabric. This eliminates the cost of two pieces of textile for one item, which cuts the weight of that fabric in half, offering manufacturers lower operating costs and consumers a lower purchase point.

While this new technology provides textile manufacturers with improved production capabilities, it is important to assess the value **AirDye®** technology brings in terms of environmental sustainability. Because **AirDye®** eliminates the use of water at the point of coloration and the need to subsequently wash and dry fabrics, production plants will no longer generate millions of gallons of wastewater or consume nearly the amount of energy required to operate existing machinery.

Colorep goes beyond saying that their technology contributes to environmental sustainability; it proves it through an ISO compliant independently conducted and peer reviewed Life Cycle Assessment. Using the results of the LCA, Colorep provides its customers with detailed eco-metric reporting. "From customer supplied project information including fabric weight, quantity, and type, we calculate the actual impacts on water, energy and Greenhouse gas savings from using **AirDye®** technology in comparison to their traditional process and provide this information in a written report," explains Paul Raybin, VP of Business Development at Colorep.

To quantify the dramatic environmental and economic benefits of **AirDye®** technology, the company completed an 18-month ISO (International Standards Organization) compliant study comparing its process to ten state-of-the-art facilities in Europe assessed by the ENEA (Italian National Agency for New Technologies, Energy and the Environment) Towards Zero Effluence

AIRDYE® TECHNOLOGY & THE LIFE CYCLE ASSESSMENT

Project and a U.N. study of what exists as the industry standard in textile production manufacturing today. As a result of the study, independently assessed and verified by three industry-focused scientists, Colorep was able to make a unique declaration that its AirDye® technology represents the highest industry standards that exist in the world.

Mr. Raybin goes on to say, "For us, the Life Cycle Assessment is a key component in bringing our AirDye® technology to market and understanding where to focus our efforts on improvements. Many companies say they have a green product or textile, but if they have not undergone any quantitative study on which to base such a claim it becomes quite difficult for customers and consumers to validate. We have and are fortunate to be able to compare ourselves to the best technology available, and that's an important difference".

[FOR MORE INFORMATION VISIT HTTP://AIRDYE.COM](http://airdye.com)



LIFE AFTER SILICON: HOW GRAPHENE COULD REVOLUTIONIZE ELECTRONICS

Rod Ruoff, a physical chemist at the University of Texas at Austin and co-founder of a spin-off company, Graphene Energy, says even the first experimental model rivaled the best available ultracapacitors in energy storage.

Ruoff believes that graphene ultracapacitors could eventually have twice the storage capacity of those available today. He expects to have useful prototypes in a couple of years. "We want to have an impact on the grid," he says.

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The HOSDB Library for Intelligent Detection Systems (i-LIDS®) is an image library used to test video analytic product performance against an objective and professional benchmark.

AGENT VIDEO INTELLIGENCE RECEIVES I-LIDS® CERTIFICATION BY UK GOVERNMENT

Tel Aviv, Israel (BUSINESS WIRE)

Agent Video Intelligence Ltd. (Agent Vi) today announced the certification of its Video Analytics software, Vi-System 3.3 service pack 1, by the UK Home Office Scientific Development Branch (HOSDB) for both primary detection system for operational alerts as well as event based recording in sterile zone monitoring applications. Vi-System is one of a select group of video analytics products that have been approved by the HOSDB for government use.

The HOSDB Library for Intelligent Detection Systems (i-LIDS®) is an image library used to test video analytic product performance against an objective and professional benchmark. Experts at HOSDB conduct yearly testing of video analytics solutions from companies world-wide. To date, a limited number of video analytics providers have received i-LIDS® certification as “primary” detection systems for operational alerts in sterile zone monitoring applications. The certification as “Primary System” indicates that a detection system can operate as a standalone system, without the support of a secondary system, due to its superb detection capabilities.

Vi-System is based on Agent Vi’s patented distributed image processing architecture which enables providing the highest detection performance using a fraction of the computational resources required by competing products. A dual core server running Vi-System software can detect, track and analyze various human, vehicle and object behaviors captured by surveillance systems for 100 cameras simultaneously; it then automatically reports such activities accurately and in real-time to pre-designated security personnel. As a result of Vi-System’s capabilities, security operators can increase their awareness of events of interest, while saving labor and significantly reducing the potential for human error.

[READ MORE...\[AGENT VI\]](#)



Sequencing technology so fast and cheap that an entire human genome can be read in eight hours for \$100 or less

BIONANOMATRIX NAMED 2009 TOP EMERGING TECHNOLOGY BY MIT TECHNOLOGY REVIEW

HAN CAO HAS DESIGNED A NANOFUIDIC CHIP THAT COULD LOWER DNA SEQUENCING COSTS DRAMATICALLY.

By Lauren Gravitz

In the corner of the small lab is a locked door with a colorful sign taped to the front: "\$100 Genome Room--Authorized Persons Only." BioNanomatrix, the startup that runs the lab, is pursuing what many believe to be the key to personalized medicine: sequencing technology so fast and cheap that an entire human genome can be read in eight hours for \$100 or less. With the aid of such a powerful tool, medical treatment could be tailored to a patient's distinct genetic profile.

Despite many experts' doubt that whole-genome sequencing could be done for \$1,000, let alone a 10th that much, BioNanomatrix believes it can reach the \$100 target in five years. The reason for its optimism: company founder Han Cao has created a chip that uses nanofluidics and a series of branching, ever-narrowing channels to allow researchers, for the first time, to isolate and image very long strands of individual DNA molecules.

[READ MORE...\[MIT TECHNOLOGY REVIEW\]](#)

Or visit the site of the \$100 genome project

<http://bit.ly/100dollargenome>



The company has a prototype and expects at least one model of its turbines to be “fully functional” in 2010.

ETV MOTORS, AN ELECTRIC VEHICLE PROPULSION START-UP, ANNOUNCES \$12M SERIES A ROUND

ETV Motors, a year-old Israeli startup developing powertrains for electric vehicles, has raised \$12 million in a first round of venture financing led by The Quercus Trust.

The funding will help the company with the research and development of what it calls a high-efficiency, dual-power micro-turbine that could be used to power electric vehicles. According to ETV’s web site, turbines offer a high-powered engine in a small and light package. The company has a prototype and expects at least one model of its turbines to be “fully functional” in 2010. The startup is also working on a lithium-ion battery.

ETV said its technology is for hybrid range-extended vehicles, which typically can be plugged in for recharging and have an onboard combustion engine to kick in once the battery has expended its juice. Major automakers such as General Motors and Toyota have announced plans to bring these types of cars to market in the next couple years.

“Our micro-turbine on-board charger and 4.7V lithium-ion cathode chemistry will facilitate the coming generations of environmentally-friendly, cost-effective, light weight and safe electric vehicles,” ETV Chief Executive Dror Ben David said in a statement.

Newport Beach, California-based The Quercus Trust sees an opportunity in marketing to the plug-in hybrid industry.

[READ MORE...\[RED HERRING\]](#)



The company's system is a wireless touch panel that shows energy consumption as it happens.

ADVANCED TELEMTRY FEATURED IN THE SAN DIEGO BUSINESS JOURNAL

SYSTEM FOR REDUCING ELECTRICITY USE IS SELF-MONITORING

By NED RANDOLPH (San Diego Business Journal Staff)

The founders of startup Advanced Telemetry are building their business on the concept that when folks see how much energy they are consuming, they will conserve.

The company's system is a wireless touch panel that shows energy consumption as it happens. It communicates with a sub-meter installed at the building site.

people will do the right thing if they have the tools at their fingertips,says CEO and co-founder Gus Ezcurra. You have to make it easy, not super expensive, complicated or have big brother do it for you.The company has 20 employees and, according to Ezcurra, its hiring one person every 10 days.

Advanced Telemetry's product EcoView works for businesses and homes. The company contracts directly with commercial clients, but has elected to use distributors to reach residential customers.

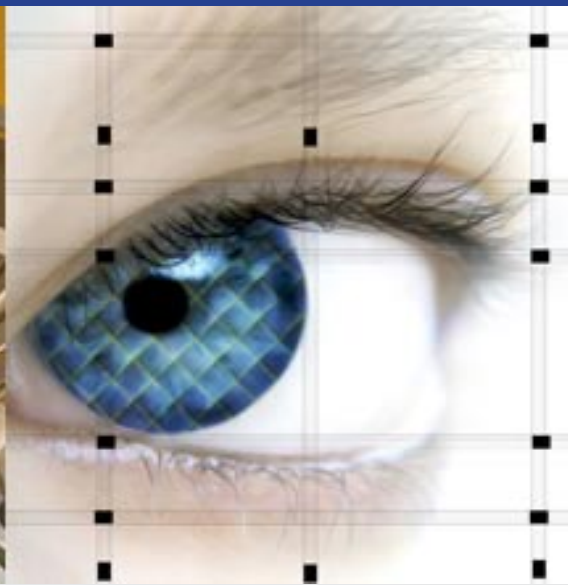
Commercial customers sign a three-year contract, paying \$600 for the equipment and installation and another \$40 per month thereafter. The company has 70 clients, many fast-food restaurants representing 100 locations with another 200-300 U.S. locations in the process of deploying, he says.

"We provide the monitoring service for them", Ezcurra says. "Most of our customers are busy running their businesses. A lot have multiple sites. The buildings must be no more than 4,000 square feet, and the customers must run their own air conditioning system, which is the biggest electricity load.

When you turn off the lights or the air conditioning, you'll see immediately that your power consumption goes down,"he said. "The payback is so dramatic. The first two to three months, you're saving 25-30 percent across the board.The panel can connect to other wireless devices in the home, like the air conditioning thermostat or lighting system."

For residential consumers, the company is turning to distributors of low-voltage products like home security systems and heating, ventilation, air conditioning servicers.

[READ MORE...\[SAN DIEGO BUSINESS JOURNAL STAFF\]](#)



We invite your inquiries regarding 21Ventures and opportunities for seed and early stage venture capital investment.

21Ventures, LLC

The Chrysler Building
405 Lexington Avenue, 26th Floor
New York, NY 10174-2699

Phone: 212-699-0842

www.21Ventures.net
info@21Ventures.net

For press inquiries; Contact David Anthony
david@21Ventures.net



Wind

TechnoSpin Inc.
Variable Wind Solutions, Ltd.

Storage

Graphene Energy, Inc.
Launchpoint Innovations
H2Scan, Corporation

Solar

3GSolar, Ltd.
Applied Solar, Inc.
Entech Solar, Inc.
Lightwave Power, LLC

Water

Advanced Hydro Inc.
BioPetroClean, Inc.
Colorep. Inc.

Efficiency

Advanced Telemetry, LLC
Clean Power Technologies, Inc.
ETV Motors Ltd.
ReGen Power Systems, Inc
TBT Group

Other

Agent Video Intelligence, Ltd.
BioNanoMatrix, Inc
Cell2Bet, Ltd.
CogniSafe, Ltd.
Command Speech, Ltd.
The Daily Jolt Network
FinAnalytica, Inc.
IQinVision, Inc.
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