



DREAM NICHE

**HECTOR ORCI
TRUMPETS
'RECESSION-PROOF'
LATINO MARKET**

**DISPELLING THE
EXCELLENCE MYTH
DEATH AND THE
NEW ESTATE TAX
BIG BUSINESS
LETS OPERA HIT
THE HIGH NOTES
LAYOVERS OFFER
TIMELY GIFTS
MEASURING
QUALITY WITH
SIX SIGMA
GLOBAL VIEW:
WE SEE BORG**

THE HEAT IS ON

The founders of Thermosoft International have developed exciting new technology that they believe will revolutionize warming. CEO Eric Kochman explains the company's plans for the future to Otis Brooks.

OUR MISSION IS to warm the world safely," says Eric Kochman, CEO of Thermosoft International. It is a bold statement but as his company develops new heating technology that can be used in myriad applications, it is something that it might well achieve.

The idea behind FiberThermics (trade name for its heaters), like all good ideas, has a seemingly elegant simplicity to it. Just as optical fibers transfer light, this technology transfers heat through electro-conductive threads specifically designed for the purpose.

The advantages are manifold: Kochman likes to describe them as the "nine S's" – soft, soothing, smart, safe, strong, supple, slim, speed, saves.

"Since FiberThermics eliminates metal wires," Kochman says, "the end product feels softer and the heating threads are virtually

which responds when shut-off may not be necessary, but when conditions call for automatic limiting in resistance and temperature.

"These 'smart' features make it safer than any available technology," Kochman says. "FiberThermics is the ultimate choice in safety."

Safety also comes from the strength and suppleness of the heating element achieved through textile weaving or laminating processes. These qualities are particularly important in products like heated blankets that will be folded, bent and laundered on a regular basis. Such wear can make metal wires in traditional blankets break and arc.

"And as our heaters are so slim," Kochman says, "they can be placed closer to the heated surface decreasing the time it takes to warm up thereby saving energy."

But while FiberThermics will no doubt transform the manufacture of heated blankets, thousands of other potential applications are available, including mattress pads, mat-

tresses, car seats, furniture, flooring, clothing and military uniforms.

"We are introducing a new generation of safe and comfortable warming products," Kochman says. "This technology will revolutionize heating like fiber optics are transforming communications. Take flooring, for example. FiberThermics could provide a much more efficient heating system than having

DUKANE

When Thermosoft launched its new breakthrough product using FiberThermics technology, it chose Dukane Ultrasonics to supply the ultrasonic equipment.

Dukane's engineers reviewed the application and designed the proper tooling and equipment for this project. The program had a tight timetable that Dukane met. In the process, Thermosoft learned that Dukane's Fabric and Film Tech Center is equipped with the latest technology and necessary resources to solve difficult assembly applications. Tech Center engineers were able to demonstrate how Dukane's equipment and processing technique can be used to solve other challenging applications. As a result, Dukane is in the process of providing yet another intelligent assembly solution for Thermosoft.

"WE ARE PROTECTED WITH PATENTS, SO WE ARE NOT AGAINST COMPETITION – IT WILL ONLY MAKE US BETTER. WE CONSIDER OURSELVES TO BE A CATALYST IN THE INDUSTRY." ERIC KOCHMAN



unnoticed by the consumer. The technology uniquely provides a soothing, gentle, radiant heat that is uniformly distributed without hot spots. It can be likened to the warmth one feels from the sun on a cool day."

FiberThermics is designed to incorporate thermal cut-off (T.C.O.), which provides automatic shut-off if necessary. In conventional industry applications, T.C.O. is achieved by adding costly and bulky components at intervals throughout the heating circuit. In Thermosoft's technology, however, T.C.O. is integral to the whole fiber-heating element. The company has also incorporated a feature called temperature-self-limiting or T.S.L.,

warm air forced through vents. The same goes for automotive applications, where an environment controlled by this technology would eliminate dust and noise.”

THE COMPANY spends more than 50 percent of its resources on research and development discovering new applications and variations on the technology itself. Heating is one thing - but Thermosoft has already taken out patents on combined heating and cooling systems.

Kochman has a test for how well this technology can be applied to different products: “Basically, the more ‘s’s’ a product can use, the more it can benefit from FiberThermics. It is extremely versatile, so a company that uses it must determine the best way to differentiate its products using the technology.”

Kochman believes that the development of FiberThermics fits in with the general market trends of going from hard and heavy goods to soft and light ones – like the move from metals to plastics. In electronic goods, components must be smaller, lighter, less intrusive and more efficient. These products are being required to do more, to be smart, to be self-regulating; all are features of Thermosoft’s electro-conductive threads.

“**WE HAVE ADAPTED** a common technological trend of moving from metals to synthetics,” he says. “But the beauty of our technology is its versatility. It can be applied to many different products and industries.”

FiberThermics started life in 1996 in the kitchens of three immigrants from the former Soviet Union: Eric Kochman, Mike

Lavit and Arthur Gurevich. Kochman holds an M.Sc. in chemical processing and a Ph.D. in electrical chemistry; Lavit has an extensive background in tool making and sales; and Gurevich holds a bachelor’s degree in civil engineering and an MBA from University of Illinois at Chicago. The three soon moved into their garages, then into a residential building across the street from Underwriters Laboratory. “We were inspired by the cold winters in Russia and more recently in Chicago,” Kochman says.

Thermosoft has just announced the completion of a North American license with Westpoint Stevens, which will be producing the first heated Vellux blanket. The company is also involved in a project with Spring Air Co. to supply heaters for what will be the first generally available heated mattress.

Kochman is excited about Thermosoft’s future and its foothold in this emerging industry: “We are protected with patents, so we are not against competition – it will only make us better. We consider ourselves to be a catalyst in the industry, and we want to see our technology used worldwide. Five years from now, heating with conductive fibers will be quite normal. It is inevitable.” ■

BATTELLE

Typical of the services provided by TRECC is the experience of Thermosoft International Corp. Executives from Thermosoft met with TRECC in April to explore how the center might help identify government interest in new fiber technology. TRECC acted as a catalyst in introducing the U.S. military complex to Thermosoft’s breakthrough fiber development. As a result, the U.S. Army Soldier Systems Center in Natick, Mass., has expressed great interest in the technology with a meeting and demonstration being scheduled as we go to press.

THE TECHNOLOGY RESEARCH, EDUCATION AND COMMERCIALIZATION CENTER (TRECC)

A dual resource for the Midwest’s R&D community

Bringing Technology to Market

TRECC Commercialization Services:

- One-on-one company consultations
- Matching of company interests with DOD opportunities and funding
- Assistance with program applications
- Facilitation of qualified collaborations
- Introduction of privately developed technology to federal agencies

Education for the 21st Century

TRECC Educational Facilities:

- An “Access Grid” node for group-to-group remote collaboration
- A networked computer education center
- An immersive virtual environment
- Conference and distant learning accommodations
- Support for advanced computing and software development

www.trecc.org | trecc@battelle.org | P: 630-845-6540 | F: 630-845-6580

TRECC is made possible through a grant from the Office of Naval Research to the University of Illinois Urbana-Champaign, and is co-managed by the University and Battelle Memorial Institute. Part of a suite of no-cost services from the Illinois Technology Business Network.

Battelle
The Business of Innovation



TRECC
Suite 201
2700 International Drive
West Chicago, IL 60185

Changing how the world stays warm

soft

supple

soothing

safe

smart

strong

slim

speed

saves

ThermoSoft International Corporation's FIBERTHERMICS™ electro-conductive textile fibers are a revolutionary breakthrough in warming technology for numerous products in a wide variety of markets.

Not only is FIBERTHERMICS applied to products that are typically used for warming, but to new products that will create new ways and new reasons to warm. Why? Because our FiberThermics heaters provide the ultimate in comfort, durability and safety while economizing the world's energy resources.

ThermoSoft is leading a revolution in warming technology. We are establishing strategic and licensed partners with market leaders to bring unique applications of our FIBERTHERMICS to consumers worldwide.

Here is how to contact us:

ThermoSoft International Corporation
310 Lexington Drive
Buffalo Grove, IL 60089
Tel: 847-279-3800
Fax: 847-279-8845
info@thermosoftinternational.com