

New Refrigeration Monitoring System Lets Restaurateurs Sleep Soundly

There's a lot that can go wrong in the restaurant business but one of the worst is a refrigerator breakdown. At the best of times chaos ensues, and at the worst, the breakdown occurs at night, when thousands of dollars worth of perishables may go bad.

But Victorian Dave Wiebe has teamed his 15 years of experience servicing industrial and commercial refrigeration units with software, electronics, and business expertise to come up with a low-cost computerised monitoring system to prevent catastrophe.

The team has put together a system, called Total Early Detection and Diagnostics, and a company, Radar Refrigeration Inc., to manufacture and market it. It is now looking for up to 30 hotel, restaurant, supermarket, fish plant or hospital refrigeration users to buy TEDD and for local investors to finance its next step to mass production.

"The product has been tested and proven. It is market-ready," says the company's financial advisor Reed Sumida, who as president of Pacific Coast Net, helped raise \$40 million in investment and absorb 18 other server companies.

What TEDD does is track the electrical load, coolant pressures, and temperature of up to eight refrigeration units at a single location, and send out an e-mail or telephone alert if any of these measures move beyond prescribed safety limits.

Radar Refrigeration's Wiebe gives a recent example: a test unit operating at Il Greco Restaurant paged him with the coded information about a high pressure warning. "I phoned up the kitchen manager and asked him, 'Have you got a plumber working over there?' He said that he did. 'Well, he's shut off the water to your cooler. Go tell him to turn it back on!'"

As owner of Island Breeze



From top: Dave Wiebe of Radar HVAC and Phil Smith of Logistix Solutions

Air Conditioning, Wiebe has had plenty of experience replacing refrigeration units which could have lasted much longer with timely maintenance. Even a repair job could cost \$1,000 and the cost of wasted food goes on top of that. But all that was available for the small operator was temperature monitoring. "By the time the temperature inside the unit climbs too high, something serious has already happened in the condenser, or the cooling system." What was needed was an early warning system that identified the location of the problem.

"I've probably been thinking about it for 10 years," admits Wiebe. He approached friend Phil Smith of Logistix Solutions Inc. about whether monitoring software could be developed. "Phil told me he could design the software but I would have to come up with the hardware."

This stalled Wiebe until a customer asked if there was a system to do just what Wiebe

had been designing in his head." I bit my tongue and nearly told him, 'there is, but it hasn't been invented yet.'"

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Wiebe found the Vancouver-based electronic engineering company J-Tech was eager to design and build the crucial

data-processing unit that goes with each refrigerator or cooler, collects information through sensors attached to various operating systems, and sends them to the onsite TEDD computer.

The TEDD computer can handle information from up to eight units, says Radar Refrigeration's Chairman Gordon English, founder and former CEO of Westronic Inc. "The average restaurant has about eight coolers or refrigerators."

But TEDD does more. After it's been in place for just 48 hours it establishes each unit's normal operating parameters, so that when it wanders beyond them, it sends a message to the manager or to the refrigerator service company with the information which part of the refrigerator is malfunctioning. "What TEDD provides is like what people in intensive care get," says English. And on the computer screen is the evidence: software designed by

Smith displays a set of dials tracking the current temperature inside the Tudor House's cooler, the power load and the high and low pressures within the cooling system. Another screen shows squiggly lines that track the same functions over the past two weeks. Wiebe points out an anomalous peak in pressure during the recent heat wave that led him to an underperforming fan, easily corrected. TEDD also provides printouts of the temperature measured six times a day, as required by the Capital Region Health Board.

Wiebe secured initial financing from long time friend, commercial fisherman Ted Rajkowski and his partner Jan Szulia and incorporated. VIATeC provided support and linked Wiebe up with English. Recently TEDD was one of five nominees for VIATeC's innovative excellence award. Also useful for finding financing: the provincial government declared Radar Refrigeration to be an Eligible Business Corporation, meaning investors qualify for a 30 per cent tax credit, which coupled with RRSP deductions can bring tax breaks up to 70 per cent of the investment. Reed Sumida says Radar probably has enough private investment to handle its next phase, which is placing enough units in Victoria restaurants to prove the system's profitability and so attract distributors. "We want to make these units, not distribute them." The next round is more ambitious, and Radar plans a 600,000 share private issue at 33 cents to finance it. This will go to make 1,000 TEDDs for marketing Canada-wide. The TEDDs will sell for from \$2,100 to \$9,000.

To find out more about Radar Refrigeration or TEDD call 250-475-0706 or visit www.radarhvac.com

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