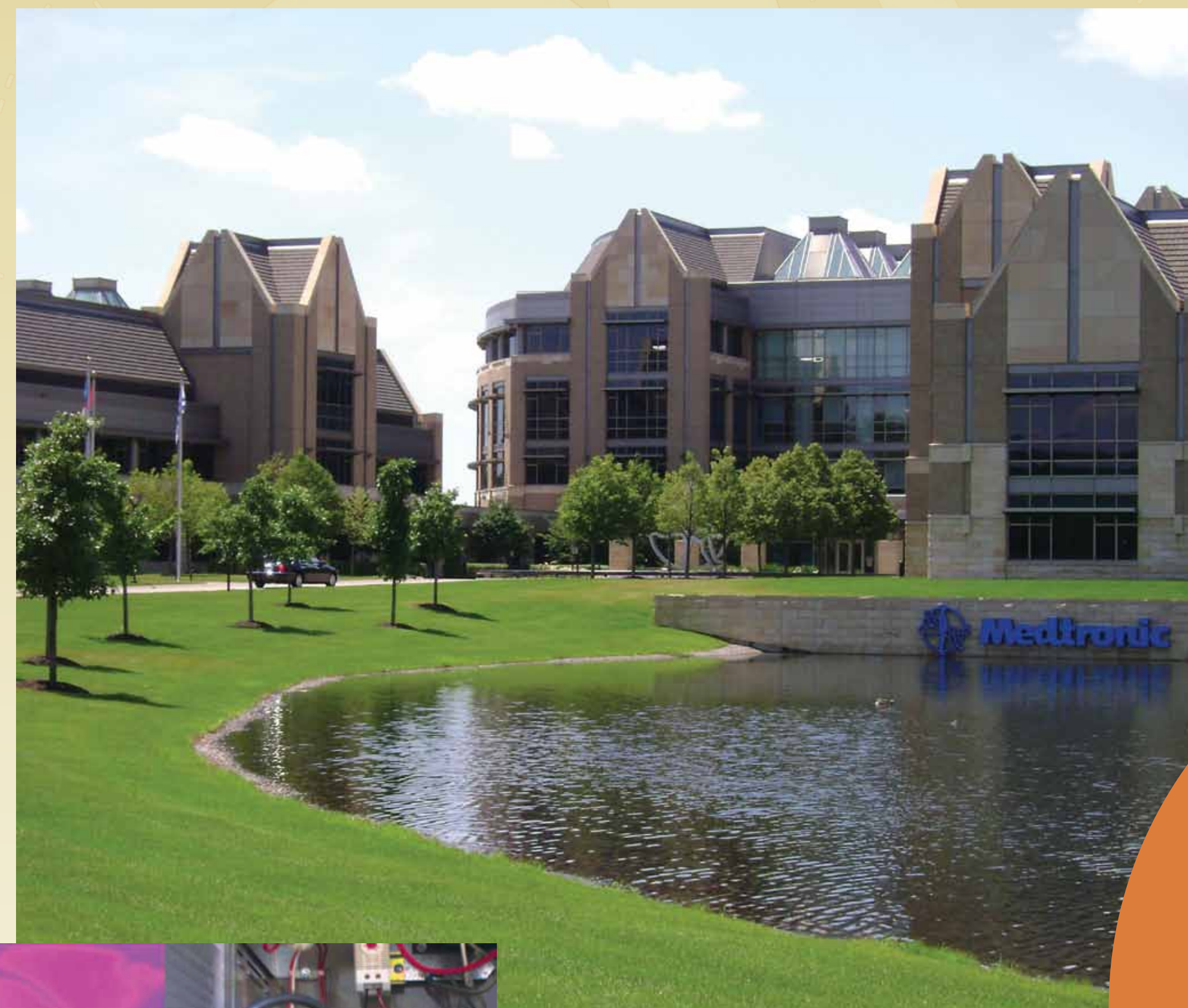


UPTIME'S **2010** POTY PROGRAM OF THE YEAR



Medtronic Facility Operations Equipment

- 2 - Ti45FT Flex Infrared Cameras
- 1 - Fluke Ti32 Infrared Camera using SmartView Software
- Thermal Trend Lean DB Software to manage our IR routes equipment and locations
- UE System Ultaprobe 10000
- UE Ultratrend Management System UE Spectralyzer
- Datastick Vibration Analyzer
- Marlin I-Pro from SKF

Best Infrared Plant Maintenance

Medtronic Facility Operations Thermography Program Highlights

Medtronic was founded in 1949 as a medical equipment repair shop located in Minnesota by Earl Bakken and his brother-in-law, Palmer Hermundsliie. Medtronic has since grown into a multinational company that uses technology to transform the way debilitating, chronic diseases are treated. Medtronic is now a global leader in medical technology serving patients and partnering with medical professionals in over 120 countries with over 38,000 employees and nearly 50 key facilities globally.

Medtronic Facility Operations first implemented their Reliability Program in 2003 at ten Minnesota facilities. The program consists of Thermography, Vibration Analysis, Ultrasound Testing and a Root Cause Program. From its beginnings as a basic

annual infrared (IR) route of the main distribution, the Thermography Program has evolved greatly. The team now performs electrical IR routes for summer loads and winter loads as well as annual routes on secondary panels, main switchgear, production equipment and data center activities. In addition to electrical thermal scans they also utilize thermography for energy savings by performing building envelope and steam traps routes. The team has also utilized infrared for water intrusion issues and has identified roof leaks and saturated insulation. Recently, Medtronic began using thermal scans in their process

for new construction to help commission and baseline new installations. This process has already identified issues with new equipment under warranty. They have reduced hundreds of hours of PMs in their CMMS by eliminating functions such as tightening lugs, cleaning electrical equipment, and taking

amperage readings. The team utilizes many safety measures such as:

- Installing IR windows on some of our main switchgear,
- Utilizing electrical rated PPE when performing electrical thermal scans,
- Replacing dangerous clips on old panel covers with either a hinged cover or a bolt with a stud to hold the cover.

After completion of a route, a work order is generated for each issue identified. An IR report,

inventory report and executive report is then sent to the facility mechanic, supervisor and manager. Once the repair is made a follow-up thermal scan is performed to verify the work. All reliability program records and critical documents are stored and made available on the Reliability Program Intranet Web site. The site also offers a calendar with upcoming routes and inspections as well as a folder for each facility to house all reports and documents including inventory, locations and route tracking.

The Thermography Program strives for continuous improvement and is constantly looking at ways to benefit Medtronic. Having a Level III Infrared Thermographer on staff has greatly helped the team to institute many best practice policies and procedures. Since 2003, the Reliability team has expanded the IR Program to twelve Medtronic facilities across the US and Puerto Rico, partnering with these facilities and working to standardize Medtronic's global thermography process.



Back Row From Left: Jon Kvamme, Ken Brustad, Gary Mayen
Front Row From Left: Dave Knox, Doug Beavens

Medtronic Facility Operations