

**BI: The Green Issue (In Interiors)**

For Facilities Decision-Makers in the New Economy

# BUILDINGS

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Rich Fiutko,  
Facilities Manager  
at Intel's Folsom, CA  
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# ROOFER Magic

By Dwight Benoy

Saving dollars at the University of Minnesota with analytical software

From office buildings to laboratories, from barns to athletic arenas, the Twin Cities campus of the University of Minnesota offers a little something for everyone in terms of facilities maintenance. With more than 200 buildings on campus – some more than 100 years old – the first challenge of maintaining the facilities is figuring out the work that needs to be done. As Eric Kruse, vice president of University Services, looked to logically inventory and classify the building envelope needs (roofs, windows, and walls) for the campus, he turned to INSPEC Inc. for help.

Kruse wanted a program that would be proactive, set priorities, and be sustainable. He wanted a program that would break projects into three groups: those in need of replacement, those needing major repairs, and those in need of general maintenance. Most importantly, he wanted the program to be clear and logical enough that the people making financial decisions could understand it.

With roofs a top priority at the University of Minnesota, INSPEC Inc. stepped forward with the ROOFER program. First developed with the Army Corps of Engineers, ROOFER is a unique roof management program that maximizes roof life while minimizing costs. Using ROOFER as the base with input from the U of M, INSPEC developed WALDO (see photo), a program designed to survey and evaluate the exterior walls, windows, and doors of a building.

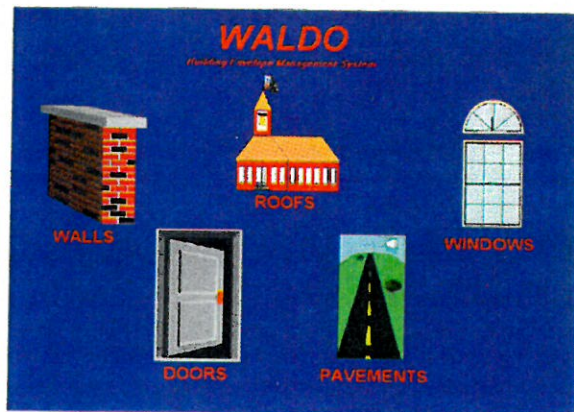
In both ROOFER and WALDO, information is collected through field inspections and standardized forms that help ensure consistency in data collection. Digital photographs are used extensively to show locations and types of defects.

After the data is entered, ROOFER and WALDO generate final reports detailing the recommended ways to manage the building envelope and adjacent pavement areas. In addition to addressing current needs, the programs also are valuable as management tools that can be updated and used to address future needs as well.

A unique feature of ROOFER and WALDO is the extensive use of digital photography to build a comprehensive image database. Buildings are photographed from a number of angles, and the images provide clear records of the condition of the windows, roofs, and walls of each building. At the University of Minnesota, the straightforward visual images made the building needs understandable to Legislators and the Board of Regents – the groups who would fund the repairs. The pictures also give contractors clear visions of the work to be done. The use of digital photography is a cost-effective way to present the necessary information both visually and accurately.

With recent technological developments in computer programming and digital

photography, cost-effective, sustainable facilities management is now possible. The successful use of programs like ROOFER and WALDO at the University of Minnesota demonstrates the value of this type of program. "Our facility management



program has given us the potential to save hundreds of thousands of dollars over the life of our buildings," notes Kruse. "Those cost savings and the increased effectiveness of our maintenance programs are important parts of our overall customer service for students, faculty, and staff."

*Dwight Benoy, a Professional Engineer in 29 states and Manitoba, Canada, has been employed at Minneapolis-based INSPEC Inc. for 25 years. As executive vice president, he currently orchestrates the long-range planning process for the company. For more information, contact INSPEC Inc. at (763) 546-3434; ([www.inspec.com](http://www.inspec.com)).*

## Priority First

In addition to making exterior building maintenance understandable, WALDO offers three additional features that are important to multi-building owners:

1. The development of spreadsheet information over a five- to 10-year period that prioritizes exterior building needs.
2. Cost estimates, including energy costs, that are updated as construction bid results are received.
3. The availability of the updated reports and information via the Web. This

ensures clients always have access to the data (no more misplaced books), including the most recent changes. The confidential information is very valuable for multi-building owners.

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