



## Case Study – UW Credit Union

EDUCATION / HEALTH CARE / LODGING / MANUFACTURING / OFFICE BUILDING / RETAIL / SPECIAL



### Controls Streamline Management, Conserve Energy at UW Credit Union Branches

#### OBJECTIVES:

UW Credit Union is a growing, federally insured financial institution committed to the financial well-being of their more than 173,000 members. The credit union has 20 locations across the state serving the Madison, Milwaukee, Whitewater, Green Bay, Oshkosh and Stevens Point areas. The facilities staff sought to integrate the heating, ventilation and air conditioning (HVAC) controls at numerous locations in order to maximize occupant comfort and minimize energy usage through total building control. The facilities staff also wanted access to all building controls from the corporate office in Madison. The existing control system featured a combination of Carrier variable volume/variable temperature (VVT®) controls, including earlier 3V® controls and more recently installed BACnet® VVT® controls, so the total control solution needed to combine all of these systems into one.

#### SOLUTION:

Over the years, Temperature Systems, Inc. (TSI) has supplied UW Credit Union with numerous Carrier 48 series constant volume rooftop units (RTUs) that provide occupant comfort at the credit union's branch locations, along with the corresponding VVT control systems to monitor and control the RTUs. To accommodate the facilities staff's desire to expand their control capabilities beyond HVAC, TSI recommended utilizing the BACnet controls' ability to interface with other applications. TSI further suggested the Carrier i-Vu® Pro web-based user interface to provide access to controls at many of the credit union's locations. This enabled the facilities staff to troubleshoot distant equipment directly from their office, reducing calls to the local HVAC contractors who service those locations for the credit union.

*The i-Vu® user interface — in combination with the control system — allows UW Credit Union staff to monitor, troubleshoot and maximize the efficiency of rooftop units as well as lights, fans and other equipment at branch locations all over Wisconsin.*

#### Precise Control and Management of Multiple Locations with i-Vu® User Interface





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### SYNOPSIS:

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*“When someone calls about a change in temperature, we go online [using the i-Vu® interface] and check their setpoints and trends, and use that as a starting point to troubleshoot the concern.”*

Todd Peterson,  
Facilities Technician III,  
UW Credit Union

Over the years, Temperature Systems, Inc. (TSI) has supplied UW Credit Union with numerous Carrier 48 series constant volume rooftop units (RTUs) that provide occupant comfort at the credit union’s branch locations, along with the corresponding VVT control systems to monitor and control the RTUs. VVT is a zoning strategy that enables a single rooftop unit to provide different levels of comfort to different areas of a building. In the case of the credit union, for example, the RTUs serve both the teller desk and the enclosed offices where employees work. These spaces have different heating, cooling and ventilation requirements. By using integrated digital controls such as 3V and BACnet VVT, the variable volume/variable temperature system enables each RTU to perform efficiently while maximizing comfort all over the facility. The high performance of these controls inspired the facilities staff to expand controls coverage to additional building systems such as the Leviton lighting networks.

To accommodate this expansion, TSI recommended utilizing the BACnet controls’ ability to interface with additional building systems. TSI further suggested the Carrier i-Vu® Pro web-based user interface to provide access to controls at many of the credit union’s locations. In some instances, this required TSI to introduce the latest Carrier BACnet VVT controls alongside the older 3V controls, creating a mixed control network that communicates seamlessly both at each individual location and within the greater statewide i-Vu network.

The i-Vu interface enables the close tracking and adjustment of equipment for maximum energy efficiency, and provides real-time data on operations at remote locations so the facilities staff can troubleshoot distant equipment directly from their office, saving hours of drive time and reducing calls to the local HVAC contractors who service those locations for the credit union.

Todd Peterson, Facilities Technician III for UW Credit Union, said, “We use the trending capabilities of the i-Vu interface quite often, and we check the temperatures and lights at all networked locations once a week. When someone calls about a change in temperature, we go online and check their setpoints and trends, and use that as a starting point to troubleshoot the concern. If I do need to call my local service technicians at a distant location, I am able to provide full details of the situation before they go in.”

The credit union’s facility staff and TSI have continued to expand control capabilities. Shane Lyle, Controls Department Manager at Temperature Systems, Inc. said, “We started by integrating the HVAC controls, but we are constantly finding new pieces of equipment that can also be integrated, from exhaust fans to electric signage to space heaters, fireplaces and televisions. The credit union is seeing a positive trend in energy usage, thanks to this greater level of control.”

### Project Summary

**Location:** Madison, Milwaukee, Whitewater, Green Bay, Oshkosh and Stevens Point

**Project Type:** Controls

**Building Size:** 13 branches and 78,000 square feet utilizing the i-Vu® controls

**Building Usage:** Financial services

**Objectives:** Integrate heating, ventilation and air conditioning (HVAC) controls with additional building systems; access controls from the corporate office for greater energy efficiency and remote troubleshooting capability.

**Equipment:** Carrier 48-series rooftop units (RTUs); additional space heaters, exhaust fans, fireplaces, lighting systems.

**Controls:** Carrier 3V® Control System; BACnet® VVT® Control System; i-Vu® Pro web-based user interface.

**Major Decision Drivers:** Rooftop units’ capacity for variable volume and temperature zoning to serve multiple areas of a facility with one RTU; BACnet controls’ ability to integrate multiple building systems, plus capability to coexist with 3V VVT controls; i-Vu interface’s

ability to provide web-based access to controls at remote locations.

**Unique Features:** Statewide monitoring and troubleshooting from corporate office; increased equipment control provides greater energy efficiency and reduced utility costs across the UW Credit Union branches.

**Installation Date:** 2006-2011; ongoing.

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