SWARM
Small Workplace Automation & Remote Monitoring

Building Operator Module
What is SWARM?

• **SWARM connects isolated buildings** on campus to a **central HVAC** control and monitoring system

• This enables **better temperature control** in the space, **better information** for HVAC technicians, and the potential for **energy savings** due to more efficient HVAC use
What isn’t SWARM?

• SWARM will not:
  • Upgrade or fix HVAC equipment issues like balancing and broken units
    • Please put in a work order to Facilities for this
  • Add more temperature zones to the building
    • If there are large spaces with no thermostats, we can add a sensor to average the space heating and cooling with a nearby thermostat
  • Take away control from the building users
    • You will still be able to view and adjust the thermostats!
How Does SWARM Work? – *Site Visit*

- A member of the SWARM team will reach out to set up a site visit with the building operator.
- We will want to determine the number and location of all thermostats and find a secure location for the gateway.
- We will also discuss the use of the building, historical comfort levels, and building schedule.
How Does SWARM Work? – Building Setup

- If the building is determined to be a good candidate for SWARM:
  - All thermostats in the building will be replaced with wireless enabled thermostats.
  - An Ethernet port will be installed, ideally in an IT or mechanical closet.
  - A wireless gateway will be connected to the port and communicate with the thermostats.
How Does SWARM Work? – *Thermostat Setup*

- One goal of SWARM is to create *set points* and a *schedule* for the building.

- The SWARM team will work with the building manager to determine **when the building is in use** and **appropriate temperatures** for the space at these times.

- Ideally, these schedules will not be adjusted:
  - *Special events* can be created when needed.
  - The thermostat can be *locked* to avoid schedule adjustment.
How Does One Use SWARM? – SWARM Website

- The main interface for SWARM is on a website hosted by Pelican Wireless, the makers of the thermostats
  - ucdavis.officeclimatecontrol.net
- You will only be able to see your building
- From this page, you can look at the thermostats in your building
How Does One Use SWARM? – *Thermostat Dashboard*

- Within each thermostat in your building, you can:
  - View the current temperature and status
  - Change the heat and cool set points
  - Lock/unlock the physical thermostat
  - View/change the schedule
  - Create an event
  - Look at historical data
How Does One Use SWARM? – Creating Events

To create a special event that deviates from the regular schedule:

- Go to “Events Calendar”
- Choose “New Event”
- Set the time, date, and temperature settings you want for your event and hit “Done”
Thank you!

Questions or concerns? Email SWARM@ucdavis.edu