

# MAXIMIZING YOUR AUTOMATION SYSTEM (And WHY)

March 2018



# What is your system status?

When was the last time you verified temperature setpoints?

When was the last time you verified operating schedules?

Are any of the schedules overridden?

When was the last time you checked your outdoor air dampers for function and for leakage?

When was the last time you performed sensor calibrations?

**AND – where do you find the time to do all this?**



# Who does your “Programming”?

Everyone should be able to perform the following functions:

- Temperature Setpoints
- Setup / setback temperatures
  - Schedules
  - Alarm conditions
- Maintenance alerts
  - Trends



# Who does your “Programming”?

The difference between “programming” and data acquisition

- Programming means operating parameters and often is complex and inter-related to various functions. Typically pre-written at the factory.
- Data acquisition is a “harvesting of information” and does not affect the operation of the air handlers, chillers, boilers, etc.
- We use data to manage our system from an Energy standpoint.



# Engaging your Controls Contractor for mutual benefit. ( Win – Win!)

- The “original sin” in the Controls Business
- Bridging the Gap – the enlightened approach
- What they give up – or so they think
- What they gain – when they change their thought process
- Everyone tunes into station “WIIFM”



# The “Original Sin” in the Controls Business

- Before BACNET the Controls Contractors clearly understood that whoever got the first Automation Project at a facility also won all the “follow-up” business.
- The Unfortunate Consequence is that the first project was done “on the cheap” to avoid losing much money with hopes of recovering the profit on the ensuing projects.
- This resulted in many underperforming BAS Systems.



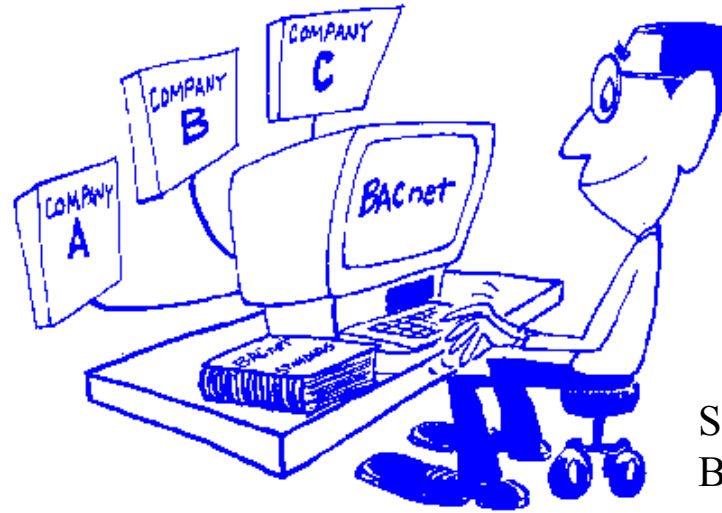
# The “Original Sin” in the Controls Business

- ASHRAE Standard 135 is BACnet – Building Automation Control Network
- Enables various Manufacturers Controls to “Talk to each other”.
- Generally wind up using Technicians from both Controls Manufacturers to make this happen.
- Best know solution for multi-vendor platforms if probably Tridium for Niagara Frameworks – (now owned by Honeywell)



# ASHRAE Protocol Standard 135

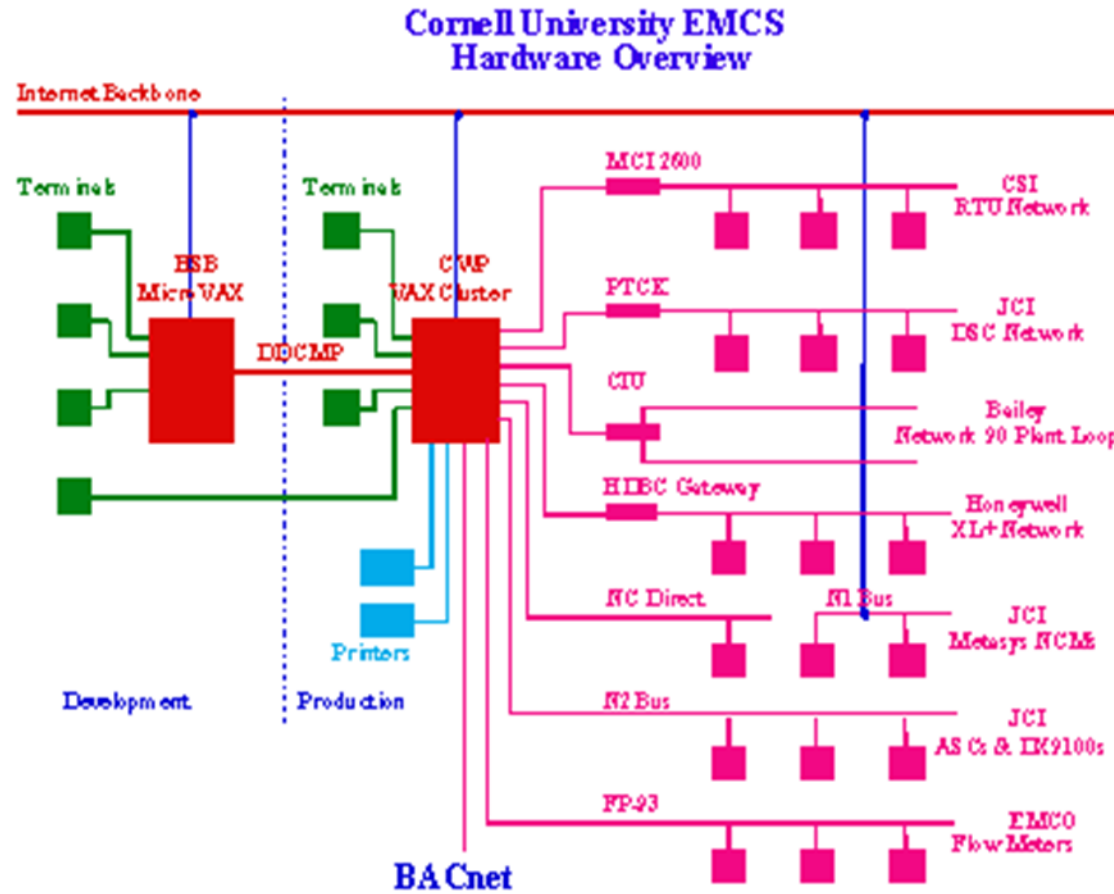
One Central Station Can Talk to Different BAC Vendors' Equipment



Source:  
BACNet.org



# The “Original Sin” - “fixed”?



# Engaging your Controls Contractor ( Win – Win!)

Some Controls Contractors hesitate to allow Maintenance Staff full access – particularly during the “warranty period”.

They fear that they will wind up fixing your mistakes and will not be able to charge for their services.

Some fear the “loss of ownership of the customer / facility as they may not be needed for ongoing services.



# Engaging your ( Win – Win!)

Everyone should tune into station “WIFM” – “what’s in it for me?”

In most cases we do not recommend “running naked” without support from the Controls Contractors. They can be a valuable resource once they buy into the win-win and realize they can maintain a revenue stream on an ongoing basis.

The more things they teach you how to do the better it is for them as the relationship becomes very corroborative and you become a “team” intent on Harvesting all the available benefits.



## Engaging your ( Win – Win!)

In a win-win relationship the Controls Contractor recognizes that the make-up of Maintenance Staffs change, people come and go, new folks need training and may need some handholding – all of which is revenue!

Most importantly, as all the available system capabilities are brought forth it encourages system expansion and upgrades.



# Using Trends and creating “Rules”

- A trend records information over time
- The trend is your friend
- What is a “Rule”?
- Exception based reporting examples and their positive interactions with the maintenance staff.
- Working with your Controls Contractor to create “rules”.



# Using Trends

- A trend records information over time
- The trend is your friend
- Keeping track of the space temperature in the Boss' office
- Track the differential pressure across the air filters to determine when to change filters.
- Track occupancy reports daily...



# Creating “Rules”

- What is a “Rule”?
- Exception based reporting.
- Example might be: Your facility is open from 8:00 Am until 6:00 PM. You create a rule that reports any air handler or package unit that runs during unoccupied time.
- Working with your Controls Contractor to create “rules”.



# Your control system is a “Constant Commissioning” System!

- All systems degrade slowly
- Human interaction is essential
- Minimum requirements of the operators
- It is not your replacement – it is your TOOL
- Defining “Constant Commissioning” and the use of Energy Information Systems (Dashboards)





# Your control system is a “Constant Commissioning” System!

- All systems degrade slowly
- Human interaction is essential
- Minimum requirements of the operators
- It is not your replacement – it is your TOOL
- Defining “Constant Commissioning” and the use of Energy Information Systems (Dashboards)



**End of This Module**

**Any  
Questions?**

