



2019 EDUCATION PROGRAM • FREE INDUSTRY SESSION



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Semantic Tagging Passes an Inflection Point – Understanding Project Haystack

Presented by AutomatedBuildings.com

JOIN US! TUESDAY, JAN. 15 • 10:30AM – 11:30AM • LOCATION: B311

The background is a dark blue field filled with faint, glowing binary code (0s and 1s) and hexadecimal characters (A-F). Overlaid on this is the word "data" in a large, stylized, light blue font. The letters are slightly transparent, allowing the background elements to be seen through them. The 'd' and 'a' are particularly large and prominent.

Data has changed the way companies in every industry does business and manages performance

Data is now an irreplaceable asset

DATA, A BLESSING AND CURSE

Data has tremendous value – but requires effort to unlock that value

Overwhelming to organizations

Requires a data strategy and plan for optimal results



COMMON OBSTACLES

- Lack of sharing
- Ownership
- Silos
- Quality
- Reliability and Continuity
- Overload-too much data; not relevant
- Separate systems
- Lack of centralized data management
- Resources and planning
- Lack of personnel who understand data
- Improper labeled/identified data (or not at all)



TRADITIONAL WAYS DATA HAS BEEN USED

Energy efficiency, occupant comfort, reduce maintenance time

- Fault Detection: Identify broken dampers and valves as they break
- Energy Analysis and Management: Automatically calculate the energy and cost impact of broken equipment
- Prioritize current operational issues based on their relative cost impact
- Identify unnecessary periods of simultaneous heating and cooling
- Identify sensors drifting out of calibration
- Compare current facility operation to the “typical” day, week, or month during similar weather
- Compare energy use of one building to other buildings across a campus
- Compare similar equipment, such as chillers or boilers within a plant, to determine which is most efficient
- Analyze current energy spend and predict future energy spend
- Analyze occupant comfort data to pinpoint trouble areas



NEW WAYS DATA IS BEING USED

- Space Utilization
- Occupant Engagement
- Well-being
- Productivity
- Preventative/Predictive
- Financial Performance
- Asset Value



3 THINGS DATA SHOULD DO

- Increase the lifespan of your building automation systems and mechanical equipment
- Provide direction on top priorities for maintenance, comfort, and energy and cost saving
- Get it to those who are most suited to act on it in a format that matches their needs



SEMANTIC TAGGING

Practice of applying
descriptive information
to data

Meaning & Presentation

Facilitates communication
and finding information



HAYSTACK WHAT IS IT?

■ Situation

- Equipment systems, control systems, IoT devices produce vast quantities of data
- Data has poor inconsistent descriptors to define its meaning
- Results in significant manual efforts and cost

■ Solution

- Standardized methodology that describe the meaning and relationships of data
- MARKUP LANGUAGE FOR DEVICE AND EQUIPMENT DATA
- Normalization of data from systems and devices of all types with a uniform data modeling methodology



PROJECT HAYSTACK'S ROLE WITHIN THE DATA ENVIRONMENT

- Consistency of data definitions
- Uniform way to interpret the meaning of data points
- Integration of disparate systems
- Solves the poor (non-existence) semantic modeling issue and supports standard data tagging
- Reduces time required to define and interpret data
- Insures data is understood and categorized in a standard way



PROJECT HAYSTACK'S ROLE WITHIN THE DATA ENVIRONMENT

- Insight into dataset and whether it is potentially of value
- Bridges gap for data interoperability
- Unlocks opportunities by unifying data across the enterprise
- Single data view across the organization
- Best practice
- Permits the choice of certain types of data which is commercially valuable and useful



PROJECT HAYSTACK -BENEFITS

- Understanding
- Integrity
- Consistency
- Uniformity
- Portability
- Transparency
- Best Practice
- Vendor Lock-In Avoidance



THANK YOU!

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