



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 features the word "data" in a large, bold, light blue font. The letters are slightly transparent, allowing the underlying hexadecimal code to be visible. The code consists of various alphanumeric characters in a lighter blue shade, scattered across the dark background.

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!

Marc Petock

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