



Agenda – ASHRAE Annual Meeting Kansas City, MO

TC 7.5 Enabling Technologies Subcommittee

3:15-4:00 pm, Sunday, June 23, 2019

KCCC 2202

Prepared by John Wallace

Objective for this Meeting: Generate ideas for research and program related to Enabling Technologies and assign owners.

Subcommittee Scope: The Enabling Technologies Subcommittee of TC 7.5: Smart Building Systems aims at exploring and developing technologies which will enable the development, implementation and commercialization of smart building applications such as fault detection and diagnostics, model-predictive control and optimization, and smart grid applications such as automated demand response. Three focal points of this subcommittee are i) smart transducers, such as sensors and actuators which provide diagnostic information, ii) communications, such as wireless devices and protocols enabling greater data exchange, and iii) embedded metadata, such as embedded equipment and system information to enable smart building applications. On these topics, the scope of this subcommittee includes identifying and sponsoring research projects, evaluating existing technologies, providing recommendations to building operators and practicing engineers, developing supporting tools for researchers in these areas, and organizing programs to disseminate research findings and advancements among ASHRAE members.

Related Committee activities: BACnet SSPC 135 committee AP data modeling working group, Facility Smart Grid Information Model, Computer Applications, Emerging Technologies, SGPC 20 HVAC process data exchange requirements and SPC 205 Standard Representation of packaged unit models.

Time	Item
3:15	Call to order; Introductions; Agenda Overview
3:20	Review/summarize previous idea topics: <ul style="list-style-type: none">a) Gas & Water sensing for building monitoringb) New sensing technologiesc) Impact of IoT on building control & monitoring
3:40	Call for new ideas to investigate & discuss
4:00	Wrap Up/Adjourn

Minutes from the Atlanta (January 2019) TC7.5 Enabling Technologies meeting included as background info on the next page.

Meeting Minutes

TC 7.5 Enabling Technologies Subcommittee

3:15-4:00 pm, Sunday, January 13, 2019

Prepared by John Wallace, Subcommittee Chair

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Subcommittee Scope: The Enabling Technologies Subcommittee of TC 7.5: Smart Building Systems aims at exploring and developing technologies which will enable the development, implementation and commercialization of smart building applications such as fault detection and diagnostics, model-predictive control and optimization, and smart grid applications such as automated demand response. Three focal points of this subcommittee are i) smart transducers, such as sensors and actuators which provide diagnostic information, ii) communications, such as wireless devices and protocols enabling greater data exchange, and iii) embedded metadata, such as embedded equipment and system information to enable smart building applications. On these topics, the scope of this subcommittee includes identifying and sponsoring research projects, evaluating existing technologies, providing recommendations to building operators and practicing engineers, developing supporting tools for researchers in these areas, and organizing programs to disseminate research findings and advancements among ASHRAE members.

Time	Item
3:15	Call to order; Introductions; Agenda Overview
3:20	Review existing RTAR's and research ideas
3:40	Call for new ideas to investigate & discuss
4:00	Wrap Up/Adjourn

Minutes:

Existing RTAR's and research ideas

- 1) We discussed the interest in data tagging and meta data associated with point which was introduced at the last meeting. There is a BACNET committee (223) that is considering haystack and how to include elements of it. Brick has also been mentioned as a possibility to include in the committee work.
- 2) Dennis had mentioned that he may be able to provide names and point data from several sites that could potentially be used as part of a training or research project.
- 3) Scrabble is a project at UCSD which could lessen the "human effort" required to map metadata into a usable format. This could enable FDD to be applied on existing building with much less effort.

New Ideas to investigate and discuss

- 1) Several members discussed the concept of including Gas and/or Water sensing in a building to create a wholistic view of the building. Regulation on water usage is becoming more important and would fit into the idea of a monitoring system that provides broad building information. We decided to introduce the topic at the Smart Grid subcommittee as well.
- 2) IOT and new types of sensors could be an interesting topic (possibly in conjunction with TC1.4). We could include how new sensors create opportunities for monitoring and controlling potentially at a more granular level. Potentially include as part of the wholistic building. This could include information on system integration and the value of including different types of data into a monitoring system.
- 3) We discussed the idea of having a seminar on best practices related to monitoring and instrumentation (potentially with TC1.2 or TC1.4). This could be split into a basic and advanced part with the advance covering smart sensors, IOT, etc.

