

TC 7.06 Building Data Exchange Subcommittee Tuesday, June 28, 2022, 10:00 – 12:00 EDT

Hybrid Conference / Toronto

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Attendees

			Member (VM,	
Name	Affiliation	E-Mail	CM, or Guest)	YEA
Nicholas Long	NREL	nicholas.long@nrel.gov	VM TC7.6	N
Mark Borkum	PNNL	mark.borkum@pnnl.gov	Guest	N
Jie Xiong	NREL	jie.xiong@nrel.gov	Guest	N
Harry				
Bergmann	U.S. DOE	harry.bergmann@ee.doe.gov	Guest	N
Lauren Adams	NREL	lauren.adams@nrel.gov	Guest	N
	University of			
Amanda Webb	Cincinnati	amanda.webb@uc.edu	VM	N
Kelly Majewski	JLL	kelly.majewski@am.jll.com	PCM	Υ
	DC Department			
	of Energy &			
Andrew Held	Environment	Andrew.held@dc.gov	Guest	N
Liam Buckley	IES Ltd.	Liam.Buckley@iesve.com	Guest	N
Sagar Rao	AEI	sagar.rao@outlook.com	Guest	N
Annie Smith	Ross & Baruzzini	smithannelise314@gmail.com	VM	Υ
Stephen Roth	Carmelsoft	sroth@carmelsoft.com	Guest	N
Paul Mathew	LBNL	pmathew@lbl.gov	VM	N
	Hitchcock			
Rob Hitchcock	Consulting	rjhitchcock@gmail.com	Guest	N
Jeff Wanner	U.S. DOE	jeffrey.wanner@ee.doe.gov	Guest	N
Jason DeGraw	ORNL	degrawjw@ornl.gov	PCM	N
Katherine				
Fleming	NREL	katherine.fleming@nrel.gov	Guest	N
	Interval Data			
Gregory Cmar	Systems	gregory.cmar@intdatsys.com	Guest	N



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ΑII

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<u>Meeting</u>

10:00 Introductions

Acknowledgment of previous meeting minutes

(http://tc0706.ashraetcs.org/)

10:10 Announcements and Remarks Long

Desire to make the meeting only 2 hours (instead of 3) from 10AM to Noon.

10:15 Old Business / Action Items Long

See updated action items at the end.

10:45 Round Table on Building Data Exchange Updates

Standards and Schema

<u>229P - Protocols for Evaluating Ruleset Implementation in Building Performance</u> Modeling Software

No Updates

223P - Semantic Data Model for Analytics and Automation Applications in Buildings

Standard is being automatically generated from the turtle file. DOE is supporting. Comments in text through python to word/html/pdf.

205P Representation of Performance Data for HVAC&R and Other Facility Equipment

No updates

232P - Schema-Based Building Data Model Protocols

Committee is still trying to figure out what to do. Next meeting is in July.



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BEDES and Mapping Manager

BEDES is a data dictionary, not a schema. Update in December. Mapping Manager helps mapping schema (or native format) to BEDES terms. Recent update to make it easier to use. NYSERDA has an open data portal with data from their programs, they are leveraging BEDES.

gbXML

Have over 55 tools that import/export gbXML. ASHRAE 1810RP completed late last year. Deliverables are on data.ashrae.org, validator on gbxml.org. Webinar later this year on new Revit tools use of gbXML.

HPXML

No updates.

BuildingSync

See slides: https://public.3.basecamp.com/p/VpU4yt6VXuCWuKyT76icHbKM

1836 RP – Developing a Standardized EEM / Characterization and Categorization.

Data set of 3,490 measures on GitHub. Submitted a manuscript on the project. Minor revisions on the report and hopefully download available in July.

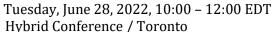
RTAR for follow up work.

What is the next step of the project? Guideline and/or standard to generate a list in what goes into a measure. Could also update Std 100 Appendix of measures. May belong in Std 211. Currently the list is what is in BuildingSync/AT... need a thoughtful process to update the list.

Atlanta seminar – talking to Marco Acasub(sp) adapting buildingsync list as part of the seminar. May add WCM related effort. Proposals are due Aug 9.

<u>Guideline 20 – Documenting HVAC&R ...</u>







Initially released in 2010, is up for update. Name is being updated to "Documenting work processes and data exchange requirements for the built environment". Focuses on defining the process of data exchange... will leverage the data.ashrae.org portal.

Committee is meeting monthly. Would like additional members if possible. Contact Dave Branson is chair.

Controls & Optimization	All	
Controls & Optimization	All	

<u>BRICK</u>

Covered a bit under 223P

Haystack

No update

<u>OpenBuildingControl – CDL</u>

Mostly led by Michael Wetter at LBNL. Effort to define the exchange format from CDL (controls description language). How to link 231P (Control Exchange Format (cfx?) Specification Standard) and 223P? Everything is trying

Design & Construction All

IBPSA BDE

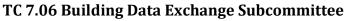
Concensus document on weather data is ready for publication. IBPSA has some bandwidth available... what do we want to collaborate on?

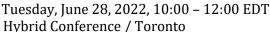
- ASHRAE audits -> modeling, standardizing measures
- How to solicit participation?
- Need smaller chunks for IBPSA BDE.
- Contact Sagar if interested in helping with these chunks.

BuildingSync Gem

No other updates, covered under BuildingSync.

BIM related tools / Rhino / Grasshopper







Need to determine how to integrate BIM design tools into the BDE.

Public Agency Programs, Organizational Updates, Compliance and Reporting

ΑII

DOE Updates

Focus on deployment. How to create more advanced EMIS systems. Understanding what the systems are in the buildings and how to get to the data. How can data management systems be used to reduce the cost of upgrades and which upgrades are cost effective?

DOE is focused on aligning data and systems through data dictionaries, standardized schemas, etc.

Focused on reaching underserved and marginalized communities. How to get to the buildings where the owners don't have the financial backing, people, time, etc? How to make the data actionable? Even when simplifying, we still need to use the current data standards and workflows that are being created.

Lots of movement regarding Building Performance Standards. How to build on benchmarking, audit/returning for BPS? Data collection through ESPM. SEED for looking at portfolio. AT for building details. Now we need to look at building asset data, tying asset changes over time and interventions. BEAM platform is being used in Washington DC. Having everything interconnect between SEED, AT, BuildingSync, BAE, etc. How to update this every 5-6 years? Need to keep audits around to understand changes over time.

This is only possible by leveraging the data standards.

Reach out to harry.bergmann@ee.doe.gov with questions.

ASHRAE Building EQ

No updates

Asset Score and Audit Template



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Asset Score assesses physical building energy of buildings. New updates include migrating to OpenStudio 3.1. Asset Score can now instantiate prototype buildings. Audit Template collects audit data for commercial buildings. Added water fields, supporting CERL, and Washington DC BPS. New conference submission for ACEEE on analysis of ~7000 buildings.

Carbon Emissions Borkum

Audit Template now includes GHG emission calculation. How to handle versioning of emission factors. Slides are available here https://public.3.basecamp.com/p/wNp1eMoFSGbbkmzL4A2Qp1YS.

Bobker – In NYC / CUNY, how to start with the extracted Asset Score building exported to OpenStudio. It was a disaster! The template had too many default values scattered all over that it was hard to undo.

What kind of datasets for GHG? Electricity is EPA eGRID with modification for T&D. Non-electricity is from national energy star factors. This is operational carbon emissions and not embodied carbon emission. Correct, eGRID does not include T&D.

Buildings tenants that pay for their own energy are considered Scope 3 emissions according to WRI.

UBID

Unique Building Identifier—goal is to replace city/local identifiers to a common scheme. UBID was added as a supported building identifier type in ESPM and EPA tools. Adding new cities. Postgres tools developer.

IEA Annex 70

No updates

11:45 New Business

Owner Centric Data Store

Cmar



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Large number of BAS systems in buildings, 1000s. We are running under a vendor centric data management. Vendors are in their own stack/silo. Analytics are a bit less siloed. Can we tell the vendors that we want all the data to go into a data lake?

Create the first ontology which is the stack... need to move the data away from the hardware manufacturer to a universally agreed upon schema. Defining an RTAR (with Eric Yang). Need to talk to manufacturers. "National Data Warehouse"

Reach out to gregory.cmar@intdatsys.com with questions.

Building EQ Use Case

Balbach

No update. Need to follow up offline.

ASHRAE & IBPSA BDE Committee Partnership

Rao

Covered above under IBPSA BDE section

12:00 Adjourn

Updated Action Items

Item	Owner	Due Date	Status
Send minutes to Yeonjin Bae	Long	2/2/2022	Complete
(<u>baey@ornl.gov)</u> & Jim Kelsey			
(Kelsey@kw-engineering.com)			
Potential program on Building EQ, its	Balbach,	8/1/2022	Programs are
portal, and API for TC7.6 programs in	Long		due on 8/7
Atlanta			
Meeting to discuss IBPSA/ASHRAE	Long, Rao	9/15/2022	
BDE alignment before next IBPSA BDE			
meeting			
Tracking relevant standards, guidelines,	Hitchcock,	2/28/2022*	Need to
and projects related to BDE. Start the	Long,		reevaluate
layout of the content for	Goel,		
data.ashrae.org.			



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Item	Owner	Due Date	Status
Discussion regarding working groups	Xiong, Pritoni, Long	3/15/2022	Canceled
Industry Coalition Outreach	Mathew	3/31/2022	Complete
Visual on how the BDE-related standards and guidelines overlap/connect.	Adams, Long	8/5/2022	To update
Building EQ Use Case for BuildingSync Validation tool	Adams,	7/31/2022	Updated
Send minutes to Yeonjin Bae (baey@ornl.gov) & Jim Kelsey (Kelsey@kw-engineering.com)	Long	7/1/2022	

^{*} Updated