IBPSA Project 2: BOPTEST
Task 2
Virtual Progress Meeting

04/25/2024
9:00 AM – 10:00 AM U.S. Eastern Time

Participation

Name	Affiliation
Filip Jorissen	Builtwins
David Blum	LBNL
Xing Lu	PNNL
Laura Zabala	R2M
Harald Taxt Walnum	SINTEF
Kyle Benne	NREL
Davide Fop	Politecnico di Torino

Total: 7

Announcements:
- BOPTEST v0.6.0 released, BOPTEST-Service v0.4.0 released with support for v0.6.0.
- In person General BOPTEST meeting at SimBuild May 21 – Tuesday 8-9 AM. Register at https://forms.gle/yPj7QRPa6hgjDQyr9. Agenda to come.
- Dave will be sending doodle to schedule next group of monthly Task 2 meetings.

Notes
1. Weather forecast uncertainty [Laura and Zhe]
   - Laura finished review of Wanfu implementation of software and left comments (Issue#135). Good if someone else reviews: Dave to review.
   - Paper is still under review with journal.
   - Q: implemented in way to be able to have real forecasts if have them if have historic weather for same period for test case?
     i. A: Error is calculated on the fly. No, would need data structures to hold and retrieve data.
   - Dave to follow up on previous notes on why AR instead of ARMA, ANN, etc.
2. Repo Refactor [Dave]
   - Dave working on BOPTEST-Service code integration into BOPTEST repo (PR#622). Javier reviewed and provided comments. Dave addressed comments and also integrating updates for Service v0.4.0. Dave will continue testing and updating documentation. Kyle to work on trying to migrate Service commit history.
3. Online Dashboard and Service [Kyle, Dave, Harald]
   - Harald tested updated Dashboard and Service v0.4.0. New features of account and test case management work ok for ADRENALIN.

i. Competitors will submit testids to competition and Harald can pull test tarball data using that information.
        ii. testid not stored in results json provided to dashboard? But is name of the tarball.
            1. testid provided in dashboard could help with results verification. But careful of making trajectory data public. Other verification method (e.g. "blue check mark" if results generated using Service?)
        iii. No user metadata stored with results json so responsibility of user to keep track of which testid want to submit.
    - Kyle working on finalizing update to Dashboard - aim for next week or so to have this out, Kyle or Dave will make announcement to group and add link and instructions to website
        i. Clean up significant digits
        ii. Fix unit labels of the KPIs
        iii. Add missing KPIs (peak demand) - requires database schema change, taking a little longer
    - Once have next update out, invite people to try, and good point to collect more feature requests to build up lists to address next year.
4. DOPTEST [Javier]
    - No update
5. OpenModelica compilation testing and library updates [Ettore]
    - No update
6. Semantic modeling [Ettore]
    - Prototyped workflow to implement initial semantic model in bestest_air test case: https://github.com/ibpsa/project1-boptest/tree/issue591_addSemanticTags
    - Created Brick .ttl file located in test case Resource directory. Added semantic information as annotations in Modelica model (according to https://obc.lbl.gov/specification/cdl.html#semantic-information) and used modelica-json (https://github.com/lbl-srg/modelica-json) plus custom script to export .ttl file.
    - Next Steps: Ettore to work on applying to larger test case (multizone_office_simple_air). Also modelica-json developers to work on inferring Modelica model connections to extract Brick "feeds" relationships.
7. New KPI – Actuator Travel [Xing and Jan]
    - Xing working on. Ran test code to see what's in testcase class variable u_store and see how other KPI methods implemented already. After checking these, have some questions, will discuss with Dave.
        i. Q: How to automate getting control input wanted for each test case? For instance, do we use _activate and _u? What about speeds, and set points?
            1. A: Just want to use _u. And likely don't want to use set points. Might want to filter based on unit e.g. K.
    - Xing divided work with Jan Marco. Jan Marco will do some documentation work and responsible for unit testing.
8. Ideas for new initiatives [All]
    - None