Feb 22, 2024 | [Task 3] (Emulator Development) IBPSA project 2 monthly meeting

Attendees:

	Name	Affiliation
	Lieve Helsen	KU Leuven
	Javier Arroyo	
	Jelger Jansen	
	Filip Jorissen	Builtwins
1	David Blum	LBNL
	Michael Wetter	
	Christoph Gehbauer	
1	Ettore Zanetti	
1	Zhe (Walter) Wang	Hong Kong University of Science and Technology
	Dan Wang	
	Wanfu Zheng	
	Valentin Gavan	ENGIE Lab
	Piljae Im	ORNL
	Yeonjin Bae	
	Sen Huang	
	Yan Chen	PNNL
	Xing Lu	
	Draguna Vrabie	
	Laura Zabala	R2M
	Roel De Coninck	DeltaQ
1	Iago Cuepero	

	Bart Merema	
1	Harald Taxt Walnum	SINTEF
	Gaurav Chaudhary	NTNU Norway
	Esther Borkowski	ETH Zurich
	Kyle Benne	NREL
1	Matt Robinson	University of Colorado-Boulder
	Patrick Henkel	RWTH Aachen
	Fabian Wullhorst	
	Laura Maier	
	Peder Bacher	DTU
	Konstantin Filonenko	
	Sicheng (James) Zhan	National University Singapore
	Rossella Alesci	Politecnico di Milano
	Davide Fop	Politecnico di Torino
	Justin Prince	Arup
	Xu Han	Harvard University, University of Kansas
	Zheng Oneill	Texas A&M University
	Mingzhe Liu	
	Kun Zhang	École de Technologie Supérieure (ÉTS)
	Xuezheng Wang	Syracuse University
	David Wolfle	FZI

Action items
- ~~Current Emulator developments update~~
- ~~Show the~~ application form ~~for new emulators submission for final approval within the group~~
- ~~Start discussion on updating review document for emulators (i.e. add SPAWN section, add control "stress testing")~~
  - Go through review document together and collect suggestions
  - Automatic testing setup similar to what is done in benchmarking PR

- ~~Start discussion on setting up "Help me" time for emulator developers to solve various issues apart from the monthly meetings~~
  - ~~Buildings discussions tab example:~~ ~~https://github.com/lbl-srg/modelica-buildings/discussions/categories/q-a~~

Notes

- **Current Emulator developments**

  - Multizone Hydronic Simple [Bart, Iago]

    Emulator is close to being finished. FMU compiles and runs. Iago will work on resolving minor issues with flow rates and nominal powers. David is updating unit tests and documentation.

  - Large Office [Yan, Xing] –

    Xing implemented an infiltration model and CO2, and might continue the implementation of ASHRAE G36 control sequences.
    Simulation stopped at 363 days for Kun during review reason TBD.

  - ADRENALIN Emulators and general update [Harald] – no update.

  - DOPTEST [Javier]

    Made PR to have new API call for disaggregated KPIs

  - Twozone Apartment Hydronic [Ettore]

    Laura probably not able to work on it anymore, Ettore will ask for the most recent model and try to implement it himself.

- **Testcase application form**
  Ettore will wait until the beginning of next week to receive feedback on the form (application form), then will send an email to the google group encouraging people to submit an application.
- **Improving review process**
  General comments on review document:
  - Review document questions should be as specific as possible
  - Possible convert review document into modeler checklist+review document (add new column)
  - Tag questions into strict requirements (i.e. CO2 modelling) and design choices
  - Add KPI to be included into Testcase configuration file (excluded KPIs will be None)
  - Think about a script that automatically generates random control sequences (between min and max), then selects random periods of the year. Simulates and plots results.
  Ettore will take a look at current review document and try to propose some modifications according to suggestions given during the meeting:
  Climate:
  If it is not a TMY file, are there any holes in the data? Is it compliant with Energy plus weather style? Does radiation make sense?

If it is TMY file, is it the most recent available (year)

Example of updating to more specific questions:

Current question (Occupancy schedule?), can be changed to (is there an occupancy schedule)

Current question (Insulation level reasonable?), possible updated question (given the the type of building is the insulation level reasonable, is it in the right position?)

- **"Help me" time for emulator developers**
  Ettore proposed to open a discussion forum on the BOPTEST GitHub repository (similar to the one for the buildings https://github.com/lbl-srg/modelica-buildings/discussions/categories/q-a). David liked the idea and will look into it. Ettore can help set up the discussion forum. This will help with general BOPTEST questions and testcase specific questions.
  Iago mentioned that there should be a notification process setup to get a heads up when a request is submitted.