

## MINUTES OF THE TECHNICAL COMMITTEE MEETING

### ATTENDEES:

Ali Vojdani	GridBright
Bryan Palmintier	National Renewable Energy Laboratory (NREL)
Dariush Shirmohammadi	GridBright
Don Hall	Exelon/PEPCO Holdings
Kaye Hesemann	GridBright
Nickolay Makarov	GridBright
Peter Klauer	California ISO
Terry Nielsen ( <b>Chairman</b> )	GridBright
Travis Rouillard	GridBright

Meeting of the Technical Committee of BetterGrids was held via phone conference on:

Date: September 7, 2017

Time: 1:00 pm – 2:00 pm Pacific

The Agenda for the meeting included (Minutes):

Introductions (5 min)

Approval of Meeting Minutes (5 min)

Update on Status of Repository (10 min)

- Post Go Live Activities
- Performance Metrics

Update on Phase 2 (10 min)

- Requirements for Phase 2
- Implementation of Phase 2

Next Deliverables (5 min)

- Summary of Deliverables
- Upcoming requests/inputs and plan for next meeting

Open Committee Discussion (25 min)

Terry Nielsen, Chairman of the Technical Committee, opened the meeting and presented the attached presentation.

### **Approval of Meeting Minutes**

The meeting minutes from the June 2017 were reviewed and no changes were made.

### **Update on Status of Repository**

Ali Vojdani presented:

- Post Go Live Activities
- Performance Metrics

There was a discussion on the interpretation of several metrics. Bryan noted that the number of model contributors was flat and relatively low. Travis clarified that the number of downloads did not distinguish between automated tools such as search engine robots downloading a model from actual users. This is relatively difficult to do and as long as we continue to use the same approach the metric should still indicate the relative growth of the repository usage.

## **Update on Phase 2**

Terry Nielsen presented the update on Phase 2 from the slides.

Bryan requested that consideration be given to add OpenDSS as the next supported format. The reasoning is that in the initial phase 2 list, 4 of the 5 formats are transmission and only 1 is distribution. Furthermore, in the NREL project they are using OpenDSS and have found that the modeling capabilities between the two do not perfectly overlap. A similar situation exists for the transmission model formats, but with 4 supported formats, a good superset of capabilities is likely well covered.

Peter asked for clarification of the purpose of the JSON format export and the internal graph model. Terry clarified that users can export models in the format initially uploaded or in the JSON format. The repository is not intended to serve as a high fidelity conversion between model formats. This is because the inherent differences in modeling approaches of the various formats prevents translations from being easily done. Format conversions are being left to model creators who can upload a model in multiple formats.

Bryan also asked about the JSON format that is being exported is the same as the University of Michigan project team's new JSON format.

Travis clarified that the JSON format is not the University of Michigan format. The database and the associated JSON export is designed for searching with a node/edge data structure and is a close mapping of the original model format. This will allow the semantic search to be done on the majority of fields in the original model format using the native model attribute names and constructs.

## **Next Deliverables**

Terry presented the slides on the Next Deliverables. There were no questions or comments on this section.

## **Open Committee Discussion**

The next topic was the Open Committee Discussion on additional functionality and services. Terry presented the list in the meeting presentation as an opening point.

Bryan commented that the GitHub integration is an important capability for model creators and should be high priority. The GitHub integration will be timely specially since the Grid Modernization Lab Consortium (GMLC) is creating a GitHub-based repository. Bryan also asked about durable object identifiers, versioning and if/how that would be supported by the repository.

Travis explained that durable link references for models are already supported by the repository. Versioning is only supported with a single metadata field. More sophisticated versioning support is needed to enable older model versions to alert users that newer versions exist. And the latest version of a model should be able to point to older versions. Bryan also discussed some ideas around creating new “layers” around models that define higher level aspects of a model such as scenarios, objectives, problem definitions and even solutions.

Peter initiated a discussion on the last topic of adding additional support for publications, posters, project results, etc (e.g., associating such information with a model).

Travis explained that technically today the repository can support submissions of all of these types of files. The additional support would be to expand the repository to include metadata, keywords, etc. that would actually enable a user to search and find this type of material.

Don Hall submitted two questions/comments via chat/email. The first was a request for a future repository demo since he was not able to attend the demo at the IEEE meeting. Don’s second suggestion was to consider publicizing the repository at <https://smartgrid.ieee.org/>. Ali responded that there are videos available on the repository web site that are essentially demos. However, a live demo or webinar of some sort is still something that we should consider.

Bryan asked about the functionality that would be included in Phase 3, and whether that would include capability to represent hierarchy of data, scenarios, and ultimately packages that support benchmarking. Ali pointed out that such considerations will be addressed as part of the Functional Requirements for Phase 3, that need to be completed by Thanksgiving.

## **Next Meeting**

The next meeting will be in December where we will be able to report on Phase 2 progress and the Phase 3 requirements phase. Terry reported that unfortunately, we had a lot of committee members who were not able to attend at the scheduled date/time. To better schedule the next meeting, Terry proposed sending out a Doodle request at the end of October, so that we can find a date/time that works well for more members.

## **Closing**

Ali shared some additional updates:

1. the BetterGrids Foundation received its Tax Exempt status from IRS in July 2017;
2. the three DOE ENERGISE projects that are planning to use the BetterGrids Repository are starting up; and

3. BetterGrids has designed and printed a business card that we can forward to the Committee members to publicize the Repository.

He also encouraged the Committee members to collaborate on grid research projects, especially in creating value-added services and solutions that can help the Repository become self-funding.

**Action Items**

- Terry to pursue scheduling a webinar through <https://smartgrid.ieee.org/>.
- Terry to schedule the next meeting of the Technical Committee.
- Travis to update the list of volunteers, putting Peter as the primary representative of the CAISO.

No further business having been brought before the Technical Committee, the meeting was adjourned.



---

Technical Committee Chair, Terry Nielsen