

## Meeting Minutes

April 22, 2022

### GWAC Members

David Forfia, GWAC Chair

Kay Aikin, Founder, CFO, Dynamic  
Grid/Introspective Systems

Ron Ambrosio, Independent Energy  
Transformation Professional

Ron Bernstein, President, RBCG, LLC

Andrew Bordine, VP Energy Mkts & Innovation,  
Anterix

Ron Cunningham, IT Enterprise Architect,  
American Electric Power

Paul DeMartini, Managing Partner, Newport  
Consulting

Gerald Gray, Sr. Program Manager, Electric  
Power Research Institute (EPRI)

Lorenzo Kristov, Principal, Electric System  
Policy, Structure, Market Design

Farrokh Rahimi, Senior Vice President, Open  
Access Technology International, Inc

Aaron Snyder, Dir. of Grid Tech. Consulting,  
EnerNex

Leonard Tillman, Partner, Balch & Bingham, LLP

### GWAC Associates & Emeritus

Rahul Bahadur, VMWare, Inc.

Mark Knight, 1898 & Company

Ken Wacks, Home, Building & Utility Systems

### GWAC Members and Assoc. not present

Ahlmahz Negash, Sr. Engineer, Tacoma Power

Jeff Morris, Schneider Electric

Mark Paterson, CSO, Strategen

Chris Villarreal, President, Plugged In Strategies

### GWAC Guests

Marc Costa, the Energy Coalition

Jaime Kolln, PNNL

Seemita Pal, PNNL

Aaron Smallwood, SEPA

David Wollman, NIST

Brett Houseal, IEEE MCE

Mark Pilkington, IEEE MCE

### PNNL Support

Susan McGuire, GWAC Coordinator

Ron Melton, Acting PNNL Administrator

## Meeting Minutes

April 22, 2022

David Forfia opened the meeting at 10:03am when a quorum was reached.

Ron Melton reviewed the current GWAC members and gave an update on the outcome of the new member slate review meeting. He let the group know that Stuart McCafferty is moving to Emeritus. He asked if Stuart McCafferty was on the call but he was not able to attend today. Ron asked David Forfia to contact Stuart and thank him for his service to the GWAC.

Ron then announced that a new member will be joining, someone who had been a GWAC member in the past, and he introduced him, Paul De Martini. Ron also noted that Paul will be giving a short presentation at the May meeting.

### GWAC 2022- 2023 Class

- Renewed Terms
  - Ron Ambrosio
  - Andrew Bordine
  - Ron Cunningham
  - Farrokh Rahimi
  - Aaron Snyder
  - Leonard Tillman
- New Term: Paul De Martini
- Non-Expiring Terms (2021 – 2022 Class)
  - David Forfia
  - Kay Aikin
  - Ron Bernstein
  - Gerald Gray
  - Lorenzo Kristov
  - Ahlmahz Negash

## Meeting Minutes

April 22, 2022



### Paul De Martini

Managing Partner, Newport Consulting  
Newport Consulting

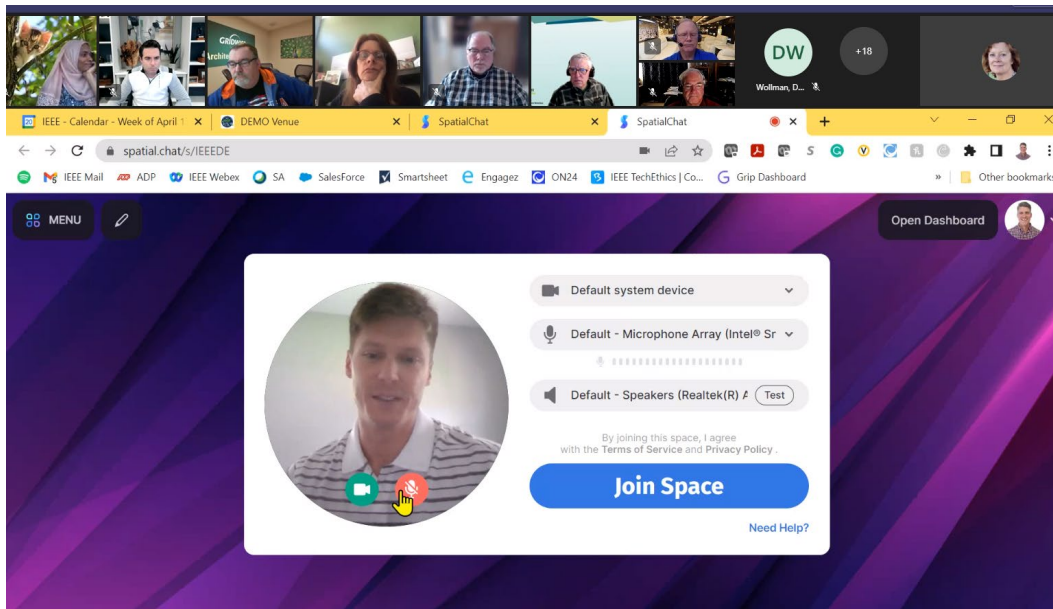
**Summary:** Paul De Martini is a leading strategic advisor on the business, policy and technology dimensions of a more distributed power system. His global clients include utilities, market operators, regulators and other government agencies.

#### Action: Paul will give a talk at the May meeting

Ron Melton introduced Mark Pilkington and Brett Housel of the IEEE MCE who are assisting with the video platform for the IEEE PES TESC 2020 conference.

Spatial Chat demo - Brett Housel

TESC22 will use Spatial Chat to facilitate the virtual poster and networking session (Conference Day 2, session 4).



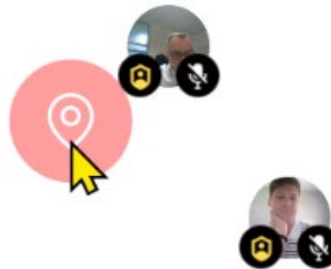
Ron Melton asked which browser is best to use with Spatial Chat.

Brett said Chrome or Safari will work but IEEE will get back to us with more options.

## Meeting Minutes

April 22, 2022

The pink dot is for “spawning”



Brett said to click, hold and drag the pink marker saying, “this is your immediate area for interaction.”

Brett showed the room design which featured many tables. Each table represents a presenter. You can move your spawning tool to get closer to a certain table that you are interested in. The closer you get, the louder the audio will get. You will be able to talk to the table that you are close to. Then you can move your spawning tool over to a new table for interactions at that table.

Brett didn’t think this would be too crowded but did say that we could create a 2<sup>nd</sup> room and spread the tables out more.

Ron thought we could have a networking room and a “poster” room for the talks.

IEEE MCE will assign authors to a table. They will drag their avatar to their own table and stay there. We should be able to put the paper number and author name on the table. We will have descriptors, text, title and names. We could have a room that is just a list of talk titles and author names to help guide people in choosing who to talk with first.

Ron said that once the person watches the video or reads the paper then they can interact with the author.

## Meeting Minutes

April 22, 2022

Farrokh asked if the PowerPoint slides could be accessed from the table while talking with the author.

Ron A. suggested that authors may be able share their screen at the table.

Ron M. felt we should keep it simple, just a discussion with the author.

This experience will be embedded into the platform of Engagez. We can add PDFs, PowerPoints, abstracts, and downloadable content. A user could navigate to these under the about tab and the resource tab.

Spatial Chat offers permission levels for users.



The MCE team thought the paper or presentation (slides) should be able to be available at the table.

Farrokh asked about the authors using the site.

Ron M. said that Spatial Chat is very easy to use, not a lot of instruction is needed.

Ron A. said there is a tutorial on the Spatial Chat website.

Ron M. said we need to be sure to get everyone to move to the Spatial Chat site after the previous conference session.

Farrokh would like to have some information to send to the poster authors.

Brett said there is a tutorial button on the screen.

## Meeting Minutes

April 22, 2022

Upgrade for IEEE DE Team

You have a free plan

Option	Price per user	Users	Space/Day	Total Price
Month Year (-14%)	\$6 / month	4 users	1 space	\$288
Day Pass	\$2 / day	50 users	1 day	\$100

The group looked at the cost of using the site and discussed the number of users.

Ron Melton asked who besides himself and Farrokh Rahimi will be at ISGT Conference next week. Kay Aikin thought Lorenzo would be. Gerald said he will go just to the T&D Expo portion; he will attend for a specific task at that conference.



## Actions

Ron M to start an effort with Jaime Kolln to review the Interoperability Constitution and consider it for a rework.

**Action:** note the F2F Organizing Committee on the agenda for the next GWAC meeting. The committee members are Ron Melton, Ron Bernstein, David Forfia, Ron Cunningham, Farrokh Rahimi and Jaime Kolln.

**Action:** send a message out when the second blog post is working.

**Action:** Susie will work with Kay and Lea to be sure that Kay gets a conference card for social media distribution.

**Action:** Susie to work with Lea and Ron Cunningham to create a card for the Future Grid session and for keynotes and for the networking session.

David noted that the reminder for the second GWAC blog post went out to with the GWAC meeting reminder for today's meeting.



## Meeting Minutes

April 22, 2022

Ron Melton reminded all TESC presenters that their MP4 videos are due this week, by Friday by midnight Pacific time

GWAC Fall F2F Meeting

### 2022 Fall GWAC Workshop Meeting

- Format – virtual
- Date – The week of Oct. 3 is proposed. The Organizing committee will be reviewing this.
- Location – San Diego has been discussed. Other proposals? (Recall that we'd like a host, ideally one who can support breakfast and lunch expenses.)
- Possible Topics
  - Future grid – perhaps west coast region (or other region if meeting is not in San Diego)
  - Review and feedback on current PNNL Grid Architecture work
  - Other ideas?
- Organizing committee so far: Ron Bernstein, David Forfia, Ron Cunningham, Farrokh Rahimi, Jaime Kolln, Ron Melton

Ron M. noted that the proposed GWAC Fall Face to Face meeting is tentatively planned for the week of October 3. The main days would be October 4, 5.



### GWAC Projects

Project	Grid Arch for Regulators	Grid Architecture White paper	TESC2022 Conference	Grid Future States	GWAC Blog Content and Review Committee
Scope	Applying Grid Architecture in the Policy & Regulatory Arenas	An introduction to Grid Architecture – including best practices and real-world examples.	Annual GWAC sponsored conference focused on Transactive Energy and related topics	Update Grid 3.0 Future States	Decarbonization, GA for Policy
Audience	Policy makers	Geared to stakeholders who aren't familiar with grid architecture	Decision makers, solution providers, labs, academics, policy, solution providers	Industry Stakeholders	
Status	On hold until after TESC 2022	Updates in progress from working meeting discussions	Final stages	Developing slide deck for TESC 2022 session	Group: Stuart McCafferty, Ahlmaiz Negash, Ron Bernstein, Tonya Barham, Rahul Bahadur, Leonard Tillman, David Katz, Tim Schoechle, Heather Donaldson
Actions	Group: Lorenzo Kristov, Larisa Dobriansky, Kay Aiken, Farrokh Rahimi, Chris Villarreal, Mark Paterson, Karen Studarus	Finalize draft	Promote conference,	Draft presentation sections, White paper content e.g. GWAC Insights – Arch gaps	
Leadership	Lorenzo Kristov	Seemita Pal, PNNL	GWAC members on the OC	Ron Cunningham	Kay Aiken

## Meeting Minutes

April 22, 2022

### GWAC Activity Matrix

Ron M. and Ron B. noted that the TESC 2022 Conference is moving along. The Organizing Committee is working on last minute details, setting up the GWAC foundational session. Some materials still need to be posted for inclusion.

Regarding the GWAC Blog activity, Ron M. noted the need change Stuarts name to be Kay Aikin going forward.

Seemita Pal, PNNL will address the Grid Architecture white paper later in this meeting.



**TESC 2022 - Grid Architecture to Decarbonize, Distribute, and Decentralize the Grid**

**May 3 – 5, 2022 and Tutorials on May 2**

- Final preparations
- Videos due this Friday, April 22, 2022
- Using SpatialChat for the virtual networking and poster session
- Please continue to promote the event!

Website: <https://ieee-tesc.org/>

Ron B. noted that Farrokh Rahimi will review the poster MP4 recordings. Ron will make sure that Farrokh has access to them.

Seemita held a meeting with the white paper team in March. They reviewed the draft, and she collected feedback from the work group participants. Then she shared the edited document with the group for further review. They are reviewing the draft to suggest additional edits or to add comments. She has gotten some email responses that the group is working on it.

She asked the work group to keep going through it and to provide comments by May 2.



## Meeting Minutes

April 22, 2022

## 🕒 Grid Architecture White Paper

- GWAC Grid Architecture White Paper working party meeting held on 23<sup>rd</sup> March from 10-11am
  - 13 participants joined
  - The group went over the high-level information in the draft document and initial feedback was gathered; there were some great discussions
  - Draft has been updated based on the initial feedback
  - Updated draft shared with the working group with the request to include all inputs, suggested changes and comments by 18<sup>th</sup> April
- Extending deadline for feedback till 2<sup>nd</sup> May to give more time to everyone to provide inputs and comments
  - Group members are starting to work through the draft
  - Looking for inputs from working party members specifically on the Section which talks about benefits of Grid Architecture from different stakeholder perspectives (Section 9)

Susie had sent out the GridArch white paper email to the TEAMS work group and Seemita sent out an email to a couple people who are not on TEAMS with the document attached.

Ron Cunningham gave an update on GFS white paper:

## 🕒 Grid FutureState White Paper – content progress

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Stakeholders' Visions/FutureStates Assessed <b>added planning horizons timeline for 10 stakeholders, added few recent ones to note</b></li> <li>• Vision/FutureStates:           <ul style="list-style-type: none"> <li>○ Similarities /Differences via web/radar chart, Harvey ball chart <b>updated for stakeholders</b></li> <li>○ Divergence <b>summary by arch topic and timeline shifts</b></li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• GWAC Insights:           <ul style="list-style-type: none"> <li>○ Architectural Challenge-gaps <b>property-qualities and categorization of gaps</b></li> <li>○ Industry Grid Drivers / <b>Systemic Issues – updated + supply chain resilience</b></li> </ul> </li> </ul> <p><b>After TESC 2022 conf, then back to completing detailed content and whitepaper prep</b></p> |
|---|--|

## Meeting Minutes

April 22, 2022

The group will finish the paper after the TESC conference. Input from the conference may influence the finalization of the paper.

David Forfia asked about the SEPA Grid Architecture Primer

Ron M. replied that it is now with SEPA to be formatted as a SEPA work product. It should be published before the end of May.

### 🕒 Liaison Reports –

- National Institute of Standards & Technology (NIST)– David Wollman
- Electric Power Research Institute (EPRI) – Gerald Gray
- Institute of Electrical & Electronics Engineers Power & Energy Society - Farrokh Rahimi
- American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE)– Ron Bernstein
- International Organization for Standardization, and International Electrotechnical Commission – (ISO/IEC JTC 1/SC 25) Home and Buildings Standards – Ken Wacks
- Interstate Renewable Energy Council (IREC)– Ken Wacks
- Smart Electric Power Alliance (SEPA) – Aaron Smallwood
- Energy Blockchain Consortium (EBC) – Tony Giroti
- Nat'l Assoc. of Regulatory Utility Commissioners (NARUC) – Chris Villarreal

### Liaison Reports

NIST - David Wollman noted that the new NIST director, Laurie Locascio has been confirmed  
<https://www.nist.gov/blogs/taking-measure/authors/laurie-locascio>

David noted the NIST webpage for the new Smart Connected Systems Division:  
<https://www.nist.gov/ctl/smart-connected-systems-division>

David provided a link to NISTIR 8419 - Blockchain and Related Technologies to Support Manufacturing Supply Chain Traceability: Needs and Industry Perspectives. The publication explains that tamper-evident and tamper-resistant information sharing technologies, like blockchain, can help create a supply chain ecosystem that assures traceability of products.

Ron Melton congratulated David Wollman on the new division which is in line with David's objectives.

EPRI - Gerald Gray gave a reminder of the EPRI Electrification 2022 Meeting, face to face, June 28 - 30, Charlotte, NC

Farrokh Rahimi reminded everyone of the IEEE PES General Meeting, in Denver, July 17 - 21, 2022. Block chain related information will be presented.

## Meeting Minutes

April 22, 2022

Ron Melton - IEEE ISGT 2023 reminded the group that Seemita Pal, PNNL is the technical chair and Farrokh Rahimi is the conference vice chair for next year's conference. The call for panels will be announced at ISGT next week. Anyone interested can let Farrokh, Ron or Seemita know. The conference will be in January next year.

Ken Wacks - IREC Customer Grid Edge (CGE) committee meets every other Friday at 1:30 EDT for 1-1/2 hours. The next meeting is Friday, May 27, 2022.

Ken Wacks - ISO/IEC JTC 1/SC 25/WG 1 "Home Electronic System" is meeting hours via Zoom each day starting May 9. Please contact Ken about participating and helping to shape world standards for home and building systems including energy management.

SEPA - Aaron Smallwood noted a new SEPA publication, "Tiers of Electricity Decarbonization," link to this document, <https://sepapower.org/resource/tiers-of-electricity-decarbonization/>

### **Congratulations Ron Melton**

David Forfia congratulated Ron Melton as he moves toward retirement from PNNL and noted that he will continue to work part time for some time. David noted his 35.5 years with the Lab. There will be an online recognition meeting through PNNL and anyone interested in attending should contact David.



Ron plans to spend more time with family and renew some hobbies including photography and ham radio. He's also planning to be able to spend time running with his friends. On the immediate horizon is his first in-person Bloomsday Run in Spokane on May 1st, his first day of retirement. This fall he is running the New York City Marathon on November 6th as a fundraiser for the Cystic Fibrosis Foundation. In lieu of a retirement gift, Ron would like donations to go to his NY City Marathon fund raising for the Cystic Fibrosis Foundation via this link: <https://fundraisers.hakuapp.com/ron-melton> Ron

## Meeting Minutes

April 22, 2022

chose fund raising for the Cystic Fibrosis Foundation because his twin brother died from CF when they were infants and in memory of Greg Dayley, PNNL.

David also noted that the next GWAC meeting is scheduled for May 18, 2022, at 10:00am Pacific time.

David asked for a motion to adjourn. Paul De Martini gave the motion and Kay Aikin seconded the motion. There were no objections and the meeting was adjourned.