



## Combined provision of primary frequency regulation from Vehicle-to-Grid (V2G) capable electric vehicles and community-scale heat pump

Meesenburg, Wiebke; Thingvad, Andreas; Elmegaard, Brian; Marinelli, Mattia

*Published in:*  
Sustainable Energy, Grids and Networks

*Link to article, DOI:*  
[10.1016/j.segan.2020.100382](https://doi.org/10.1016/j.segan.2020.100382)

*Publication date:*  
2020

*Document Version*  
Peer reviewed version

[Link back to DTU Orbit](#)

*Citation (APA):*  
Meesenburg, W., Thingvad, A., Elmegaard, B., & Marinelli, M. (2020). Combined provision of primary frequency regulation from Vehicle-to-Grid (V2G) capable electric vehicles and community-scale heat pump. *Sustainable Energy, Grids and Networks*, 23, Article 100382. <https://doi.org/10.1016/j.segan.2020.100382>

---

### General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

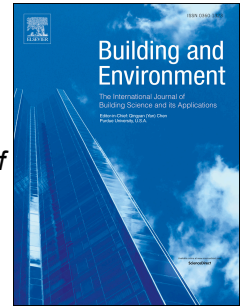
- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

# Journal Pre-proof

With regard to the letter to the editor by *Bruno M. Fazenda*. “*Misleading description of first and second order Ambisonic systems*”

Hermes Sampedro Llopis, Finnur Pind, Cheol-Ho Jeong



PII: S0360-1323(20)30454-6

DOI: <https://doi.org/10.1016/j.buildenv.2020.107074>

Reference: BAE 107074

To appear in: *Building and Environment*

Received Date: 15 June 2020

Accepted Date: 15 June 2020

Please cite this article as: Sampedro Llopis H, Pind F, Jeong C-H, With regard to the letter to the editor by *Bruno M. Fazenda*. “*Misleading description of first and second order Ambisonic systems*”, *Building and Environment* (2020), doi: <https://doi.org/10.1016/j.buildenv.2020.107074>.

This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published in its final form, but we are providing this version to give early visibility of the article. Please note that, during the production process, errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

© 2020 Published by Elsevier Ltd.

With regard to the letter to the editor by *Bruno M. Fazenda*. “*Misleading description of first and second order ambisonic systems*”

4th May 2020

We want to thank you for the interest regarding our paper entitled “Development of an auditory virtual reality system based on pre-computed B-format impulse responses for building design evaluation.”

First of all, it is important to clarify that the presented system is indeed developed and tested for the 1st and 2nd order Ambisonics, with 4 and 9 channels, respectively. However, we, admittedly somewhat confusingly, call the second order Ambisonics files ‘B-format’, which could potentially confuse readers who consider the ‘B-format’ term strictly reserved for the 1st order Ambisonics output, which encodes the sound field using 4 orthogonal and independent channels. We did it partly because the acoustic software ODEON, which we used for pre-calculation of the impulse response, names all orders (1st to 3rd) of Ambisonics formats as ‘B-format’ impulse responses [1] and it seems some other researchers also use this term for indicating higher orders as well [2-4].

In summary, despite the possibly misleading terminology ‘B-format’ that could potentially cause confusion for some readers, the presented system has been developed and tested for the 1st and the 2nd order Ambisonics, and the obtained conclusions from the listening tests remain valid.

- 
- [1] Odeon A/S, Odeon, checked: 04-05-2020. [Online]. Available: <https://odeon.dk>
  - [2] C. Nachbar, F. Zotter, E. Deleflie, A. Sontacchi. *Ambix – A suggested Ambisonics Format*, in: Proceedings of Ambisonics Symposium 2011, Lexington, KY. June 2-3.
  - [3] M. Leese, *File Format for B-Format*, checked: 04-05-2020. [Online]. Available: <http://www.ambisonic.net/fileformats.html>
  - [4] A. Farina, S. Campanini, L. Chiesi, Al Amendola and L. Ebri. *Spatial sound recording with dense microphone arrays*, in: Proceedings of 136<sup>th</sup> Audio Engineering Society Convention 2014, Berlin, Germany, April 26-26.

**Declaration of interests**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

Journal Pre-proof