



Iwan Setiawan <iwansetiawan@live.undip.ac.id>

[IJRER] Editor Decision

2 messages

Prof. Dr. Ilhami COLAK <ijrereditor@gmail.com>

Thu, Jan 18, 2018 at 6:36 AM

To: iwan setiawan <iwansetiawan@live.undip.ac.id>

Cc: Trias Andromeda <trias1972@gmail.com>, Mochammad Facta <mochfacta@gmail.com>, Hermawan Hermawan <hermawan.60@gmail.com>, Susatyo Handoko <susatyo73@gmail.com>

Dear iwan setiawan:

We have reached a decision regarding your submission to International Journal of Renewable Energy Research (IJRER), "Implementation and Performance Analysis of a Single Phase Synchronization Technique based on T/4 Delay PLL".

Our decision is to: Revisions are required on your paper. At the end of this email you will find a set of comments from the reviewers.

Please revise the paper in accordance with remarks or give reasonable explanation of ignoring some remark. After doing necessary changes on your paper, please upload it in SEVEN days through the IJRER online system along with a detailed response (a SEPERATE file) in written for the reviewers concerning the performed corrections. Corrections must be provided in OTHER TEXT COLOR in the revised paper.

Note that your revised paper should be in .doc format and should be in accordance with the template for accepted papers. You can download the template from IJRER web page (<http://ijrer.org/files/template-2.doc>).

Best regards,

Prof. Dr. Ilhami COLAK
Editor in Chief, IJRER
www.ijrer.org
icolak@gazi.edu.tr
ijrereditor@gmail.com
IJRER is Cited in SCOPUS, EBSCO and WEB of SCIENCE (Thomson Reuters)

Reviewer A:

Is the paper of sufficient originality to warrant publication in the journals?:

Yes

Is the paper clearly and sensibly arranged?:

Yes

Are the analyses and conclusions a logical outcome of the data and discussion?

(If this is not the case, please outline)

:

Yes

Quality and clarity of the writing:

Neutral

Relevance of the topic for renewable energy researches

:

Neutral

Constructive feedback for the author(s):

Overall organization and presentation of the paper are good. But there are some English spelling errors, the paper should be checked. For example "oscilloscope", "synchronization", "zero value". Figures are not clear, the colours of the signals are indistinguishable, they can be shown with arrows and should be enlarged.

Also in Table 1, symbols like Q do not appear.

Reviewer C:

Is the paper of sufficient originality to warrant publication in the journals?:

Yes

Is the paper clearly and sensibly arranged?:

Yes

Are the analyses and conclusions a logical outcome of the data and discussion?

(If this is not the case, please outline)

:

Yes

Quality and clarity of the writing:

Good

Relevance of the topic for renewable energy researches

:
Good

Constructive feedback for the author(s):

Good articulation of concept.

Reviewer E:

Is the paper of sufficient originality to warrant publication in the journals?:

Yes

Is the paper clearly and sensibly arranged?:

Yes

Are the analyses and conclusions a logical outcome of the data and discussion?

(If this is not the case, please outline)

:
Yes

Quality and clarity of the writing:

Fair

Relevance of the topic for renewable energy researches

:
Good

Constructive feedback for the author(s):

Dear Researcher,

1. This paper presented the performance comparison at steady-state conditions, I suggest the response performance be provided at the conditions of frequency change and phase change.

2. Because of the problem of steady-state error, a PI Controller is needed for the PLL control, the performance comparison about the proportional controller seems unnecessary.

3. The PLL performance is compared with output waveforms, I suggest some numeric comparison be provided.

International Journal of Renewable Energy Research-IJRER

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Iwan Setiawan <iwansetiawan@live.undip.ac.id>
To: "Prof. Dr. Ilhami COLAK" <ijrereditor@gmail.com>

Wed, Jan 24, 2018 at 9:15 PM

Prof. Ilhami COLAK,

Editor-in-Chief, IJRER

24 January, 2018

Dear Prof. Ilhami COLAK

Re: Manuscript ID 7282

We greatly appreciate the opportunity that given to us to revise our manuscript " Implementation and Performance Analysis of a Single Phase Synchronization Technique based on T/4 Delay PLL " (Manuscript ID 7282).

We have send the revised manuscript and our responses to the reviewers' comments in a separate file through the IJRER online system

Sincerely yours,

Dr. Iwan Setiawan
Department of Electrical Engineering
Universitas Diponegoro (Undip), Semarang
INDONESIA
Email: iwansetiawan@live.undip.ac.id

[Quoted text hidden]

Response to Reviewers

First of all, the authors gratefully acknowledge to the reviewers that have gave feedback and comments for the improvement of the paper that have been submitted. The authors also would like to thanks to the chief-editor that gave opportunity to the authors to re-submit the revision of the paper.

Please find our responses to the comments below:

1. Comments of Reviewer A

Overall organization and presentation of the paper are good. But there are some English spelling errors, the paper should be checked. For example "oscilloscope", "synchronization", "zero value". Figures are not clear, the colours of the signals are indistinguishable, they can be shown with arrows and should be enlarged. Also in Table 1, symbols like Q do not appear.

Authors' Response:

Thank you very much for your useful suggestion on the English and technical aspects of our manuscript. In order to improve the quality of the paper, we have rechecked the manuscript carefully and revised the typos and tried to avoid any spelling error on the whole manuscript. For the symbols in Table 1, we have omitted them.

Besides that, as you suggested, we also have improved the quality of all the experiment results on the Fig.6 until Fig.13 and add information on all the Fig. so the signals are more clearer and distinguishable.

Please see our revised manuscript.

2. Comments of Reviewer C

Good articulation of concept.

Authors' Response:

Thank you very much for your support

3. Comments of Reviewer E

Constructive feedback for the author(s):

Dear Researcher,

1. This paper presented the performance comparison at steady-state conditions, I suggest the response performance be provided at the conditions of frequency change and phase change.

2. Because of the problem of steady-state error, a PI Controller is needed for the PLL control, the performance comparison about the proportional controller seems unnecessary.

3. The PLL performance is compared with output waveforms, I suggest some numeric comparison be provided.

Authors' Response:

1. Thank you very much for your suggestion. However, due to in our work, the source of the voltage signal in which the phase angle will be estimated is derived directly from the electrical grid (as shown in Fig 3 below), so in this our experiment, we practically could not change the frequency of the voltage signal.

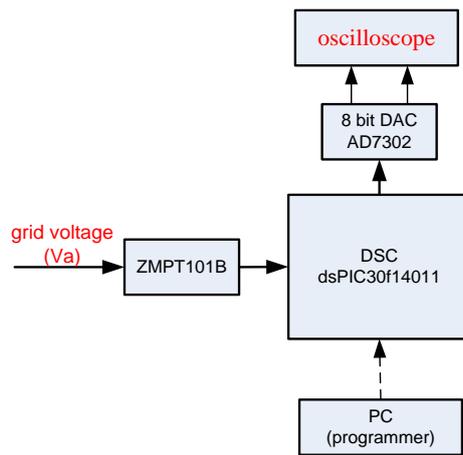


Fig.3. Hardware block diagram

2. Thank you so much for your valuable comments. We are really agree with you that for steady state error reduction of the PLL output, the standard PI controller is commonly utilized in a PLL. However due to the real mathematical model of the PLL is basically non-linear, then in this works, we want to show that the very one of the important information which the PLL controller needed is the nominal grid frequency information (that used as control bias or feedforward control).

If the value of the control bias is chosen relatively near from the nominal grid frequency, then as shown from Fig.1, the PLL model mathematically could be linearized just as an integrator. From final theorem of Laplace transform, we know that for the integrator plant, the zero steady state error could be achieved easily both using proportional (P) or proportional-integral (PI) controller. For these cases, please see our experiment results on Fig. 10 until Fig. 13.

However if the value of the control bias is chosen relatively far from the nominal grid frequency, then the PLL model mathematically could not linearized become linear model. For these case the zero steady state error could be achieved minimally by using proportional-integral (PI) controller. In addition, for these cases, the performance of the PLL output strongly depend on the chosen the controller parameters, Please see our experiment results on Fig. 6 until Fig. 9.

3. Thank you very much for your suggestion, in order to improve the quality of the paper, we have add some numerical analysis and comparison as you suggested. Please see section 4. Experimental Results and Discussion in our revised manuscript