A synchrophasor-based wide-area damping control system built with LabVIEW and FPGA is described.
The topic of the paper is important. However, an existing damping controller is implemented and no new technical approach is proposed in this paper. Moreover, this paper suffers from the technical writing issues and the authors are using the reviewers to proof read the paper and to find the errors -- of which there are many, unfortunately.

1. The term 'real-time' used in the title, but no related contents were introduced in detail. For the real-time implementation of a test platform for wide-area, the most important issue is the timing mechanism including the GPS timing for both the PMU and the controller.

2. The introduction needs to be rewritten, and the RTDS based HIL test of wide-area control system should be included.

3. The delays in the test platform should be taken into consideration seriously. The LabVIEW and NI components have worse timing and phasor calculation performance than the PMU and WAMS systems applied in actual power systems, which requires more discussion on the delay issues. For example, in Section VI Part A, the communication delays in this platform was nearly constant but not variable because the communication tasks for the test were not affected by the other tasks, and the communication network kept in idle state all the time.

4. According to the introduction and the reference, one of the advantage the tested Phasor POD algorithm is the Delay Compensation. The curves of controller outputs including the ideal one(not affected by the delay) and the actual one (the output of FPGA) under the same test condition (using the same inputs) should be compared. The comparison of outputs with different inputs in Figs. 5 and 7 are useless.

5. In actual practice all generators nowadays have their local PSS online. However, the authors have considered only one local PSS. The reason for that is they want to make the system unstable, and then stabilize it using the proposed damping controller. I do not agree with this methodology. Wide area damping controllers require significant investment in computational and communication infrastructure. The need for it arises only when local PSS are unable to stabilize the system, owing to extra-ordinary operating conditions and topologies. The true merit of the proposed damping controllers would be established when the authors are able to create a mode of instability which is otherwise not controllable with the conventional local damping controller configurations. For this, the authors may modify the topologies, increase the system operating stress or the severity of the disturbance.

6. Why the transmitted power for area 1 to area 2 in Fig. 3 is 670 MW?

7. The comparison of the proposed test platform with the RTDS based HIL test platform

should be added.

8. More citation of the paper in IEEE trans. should be added in the references, and too many conference paper were cited, which may not be verified by sufficient test results.

9. The English writing of this paper should be improved.

10. Technical writing errors (only a few of them):

a. [Page 1, Column 1, Line 18] The term 'WAMS' is widely used for 'Wide-area Measurement System' but not 'Wide-area Measurement Signal'

b. [P1, C1, L38\L41\L45] The references should be in the right order.

c. [P2, C2, L33] The abbreviation 'WAPOD' should be used directly with no need of the explanation again, which had been made in [P1, C2, L18]. Similar error appears for AVR in [P2, C1, L4].

d. [P2, C2, L2] The equation (1) 's_{avg}', 'avg' here should not be in Italic Type, because 'avg' is not a variable. Similar error appears in all the variables in this paper.

e. [P2, C2, L18] The variable 'alpha' should be '\alpha' in LaTeX.

f. [P2, C2, L48] The citation of 'Fig. 1' should not be 'Figure 1' unless it is the start of a sentence.

g. [P4, C1, L3] The left arrow should be a right arrow?

h. [P4, C2, L22] Wrong citation 'Figure ??'

i. [P5, C2 and P6, C1] The color diagrams (Figs. 5 and 7) need to be rendered in comprehensible form in black and white

In summary - the paper focus on a hot topic but there are many technical problems are not solved. The content in this paper is suitable for a conference paper but not a regular journal paper.