Dear Editors:

We would like to resubmit the enclosed manuscript entitled "Network delay and cache overflow: A Parameter Estimation method for Time Window based Hopping Network", which we wish to be considered for publication in "MDPI Journal of Entropy".

Thanks for the efficient work in processing our manuscript and the valuable comments from the associate editor and two reviewers of Entropy.

We have studied reviewers' comments carefully and tried our best to revise our manuscript according to the comments. The major modifications are listed as follows.

Q: A notation list to tabulate different symbols/abbreviation used is required.

Reply:

Thanks very much for your helpful comments. Consider that the content of these symbols is not easy to understand. In order to facilitate the viewing of symbols and abbreviations in the full text in one place, as proposed, we have added Table 1.

Q: In the paper, the figure title is too concise, please explain the figure and its symbol labeling in detail. And check the correctness of labeling in the figure, such as Chinese characters in Fig4 and 5, 30s in Fig15 and 18, and so on.

Reply:

Thanks very much for your helpful comments. In the thesis, Figures 1, 2, 3, 4, 5, 6, 7 and 8 have been labelled with detailed explanations of the figures and their symbols due to the overly concise titles of the figures. The Chinese characters as in Figs. 4 and 5 have also been corrected. An explanation of the 30s in Fig. 15 and Fig. 18 has been provided.

Q: In part 3, what are the specific external factors. The authors show the external factors can be neglected and whether this is too idealistic leading to influence the correctness of the results.

Reply:

Thanks very much for your helpful comments, we have added an explanation of external factors (line 173). In section 3, the design of the time window compensation mechanism and the estimation of the time window are under two assumptions. It is assumed that there are no network attacks on the hopping network and that the hopping network is hopping at a uniform rate, because if the hopping network is successfully attacked externally and the hopping network is down, and the time window compensation mechanism cannot continue to work. The other is that the frequent hopping of the hopping network consumes too much bandwidth and system resources, which affects the time window.

Q: In Section 4.2, is there simply only simulation results and no results comparing the theoretical framework with the simulation? If not, please specify. If so, how can the correctness of the previous theoretical model be verified?

Reply:

Thanks very much for your helpful comments. Yes, we have carried out practical validation of the delay time window in the hopping network of the LAN and passed its theoretical correctness. No practical validation of the delay time window has been performed for the hopping network of the WAN. However, this does not affect the normal use of the delayed time window in WANs and the fact that it is theoretically correct. This is mainly based on two reasons. First, the practical application is based on a sound theoretical foundation. The delayed time window is subject to rigorous mathematical and error derivation, and a suitable time window estimate can be found. Secondly, the WAN can be seen as a combined part of several LANs. Therefore, our theoretical validation of the delay time window in the WAN allows for a practical validation of the LAN-based delay time window. Although the actual situation may be deviated, it can still be used as the main basis.

Q: In Part 4, the authors consider 10ms, 20ms, 30ms, and no time window for the proposed delay time window method to conduct experiments, in practical applications, what delay time window should be selected as the most appropriate?

Reply:

Thanks very much for your helpful comments. In our experience, the actual delay time window can be set to 30ms in practice. For particularly good network bandwidth, the delay time window can also be set to 20ms.

Q: It is suggested to modify the article format according to the requirements of the journal.

Reply:

Thanks very much for your helpful comments. We have revised the format of the article in accordance with the journal's requirements.

Q: The English of this manuscript should be improved furthermore. It is better to invite a native speaker to edit the whole paper.

Reply:

Thanks very much for your helpful comments. We are very grateful to the reviewers for their honest and sincere comments. We have invited native-speaking professionals to edit and revise the full text. Thanks again to the lead editor.

We deeply appreciate your consideration of our manuscript, and we look forward to hearing from you.
Thank you and best regards.

Yours sincerely,
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