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|  | **Walailak Journal of Science and Technology** |

***Responses the referee’s comments***

**Manuscript ID:**  11233

**Title:** Automatic Thai Finger Spelling Transcription.

**Reviewer A**

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| **No.** | **Referee’s Comments** | **Responses**  (for author) |
|  | How signing and non-signing frames are separated. Is there is any technique for the separation. | We agree that this is an interesting issue. The discussion on how signing and non-signing frames are separated and additional explanation on rationale behind our choice of signing location as a cue are added at the end of the experiments and results as well as its re-emphasis in the discussion. |
|  | More explanation required for Fig.1, Fig 2. | The Figures 1 and 2 have been added more description. Thanks for pointing it out. |
|  | It would be better if the author shows how the proposed approach is better than the approaches in the literature. | The literature review has been revised to accommodate comments on how the proposed approach has extended the previous studies to a more pragmatic situation. Thanks for suggestion. |
|  | As WFS smoothening mechanism improves the performance of ATFS. Is author tested any other smoothening mechanisms that are suited to improve the performance of ATFS before comes to the conclusion of using WFS smoothening. | We have revised the entire article and corrected where it might mislead the readers, especially section the proposed system to clarify the treatments having smoothening mechanisms.  We also have rewritten the experiments and results and discussion to emphasize all other smoothening techniques that we have investigated, as well as to comment on a smoothening mechanism in general. Table 6 showing the direct comparison of all smoothening techniques we explored also has been added. Thanks for point this out. |
|  | Conclusions should be more precise. | The conclusions have been rewritten. The discussion is separated to an independent section to allow conciseness of the conclusions. Thanks for suggestion. |

**Reviewer B**

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| **No.** | **Referee’s Comments** | **Responses**  (for author) |
|  | Need to support statements with references. E.g. “. Each country creates its own sign language with its own grammar and lexicon”, “Various schemes have been employed for finger spelling …”. | These strong claims have been fixed. Thanks for pointing it out. |
|  | The title of this section is recommended to be changed to “Literature Review” | The title of the section has been changed from Finger Spelling Recognition to Literature Review. |
|  | Starting a sentence with a reference is not recommended as in: “[1] has addressed FSR for …”, “[2] has employed a Yolo-based Darknet-19”, etc. | We totally agree.  Now, these nameless subjects have all been fixed. |
|  | Figure 4 “CNN structure of SR stage”: never mentioned activation layer! as it is an important operation in a typical CNN. Please explain. | Description including type of activation has been added to Figure 4 caption. Thanks for pointing this out. |
|  | Authors spoke about frame smoothing but never shown example images to demonstrate the effects of this technique. | We have added Table 5 and Figure 6 demonstrating the effect of frame smoothening.  Thank you for pointing it out. |
|  | Typical performance results of CNN models produce very competitive/impressive accuracy. The results of the proposed approach are not up to that expectation. It is advised that the authors address this issue and hopefully justify their results. | We agree that this is a good discussion. The discussion has been rewritten to accommodate the comments on performance regarding performance reported in the previous works. |

**Reviewer C**

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| **No.** | **Referee’s Comments** | **Responses**  (for author) |
|  | please add the novelty of this research to the introduction | Thanks for pointing it out. We have added paragraphs (at the end of the Introduction) emphasizing our contributions and novelty.  In addition, the abstract has also been revised. |
| Remark: the entire article has been revised so that the changes will read seamless with the rest of the article. | | |