

# A Guide to Technical Report Writing

Chaiwoot Boonyasiriwat

## ABSTRACT

The Abstract section is one of the most important parts of a report since the reader will read this part first and will decide whether or not to continue reading the report depending on the content of the Abstract. The Abstract should contain some introduction to the research topic, main theories or methods involved in the research, key research results, and concise summary or conclusion. In other words, the Abstract is the extremely compact version of the full report that contains all the important information about the research project.

## INTRODUCTION

The Introduction should contain three parts: Review, Claim, and Agenda. The Review part is composed of the overview of previous research related to the current research. Some key references such as research articles should be referred to in this part. It should be written in a way that leads to the need for the research conducted in the technical report. Then comes the Claim part which contains key contributions of the current research work. The final part is the Agenda which is comprised of a concise description of how each section of the report is presented to convince the reader of all the research contributions presented.

For more details about how to write the Abstract and the Introduction, the reader is referred to the papers by Landes (1966) and Claerbout (1988).

## THEORY OR METHODS

This section should contain enough details such that other researchers can repeat the research work presented in the current report. Typically, mathematical equations are presented with the minimal amount to allow the reader to smoothly read the report. The detailed mathematical proof or derivation should be put in the Appendix section.

Any theories or methods presented in previous report or article can also be briefly presented such that the report is self-contained. If the method to be put is too long, the author should instead provide a citation.

## RESULTS

This section is composed of experimental design, parameters, and results. Each additional experiment should bring in new information or issues to be discussed. The results should be presented professionally as graphs, tables, or images with an informative caption. Any graph should contain labels for all the axes with units if possible. Any texts in the figure should be large enough for the reader to read without a glass magnifier.

All figures and tables put in the report must be referred to in the text. This is the same for all the references. Otherwise, the author should be not put them in the report. For example, Figure 1 shows the Marmousi velocity model which is put here as an example.

## SUMMARY OR CONCLUSION

Many authors incorrectly use Conclusion in their report. Unless the author have really completed his or her research study, the word Summary should be used instead to summarize what have been done and key outcomes of the work.

## ACKNOWLEDGMENTS

The author should appreciate anyone who help or contribute to the current work and put their names in this section. If the contribution is significant, that person should be listed as a coauthor. Sponsors of the research work should also be put in this section.

## REFERENCES

Claerbout, J. F., 1988, A scrutiny of the introduction. Stanford Exploration Project Technical Report.

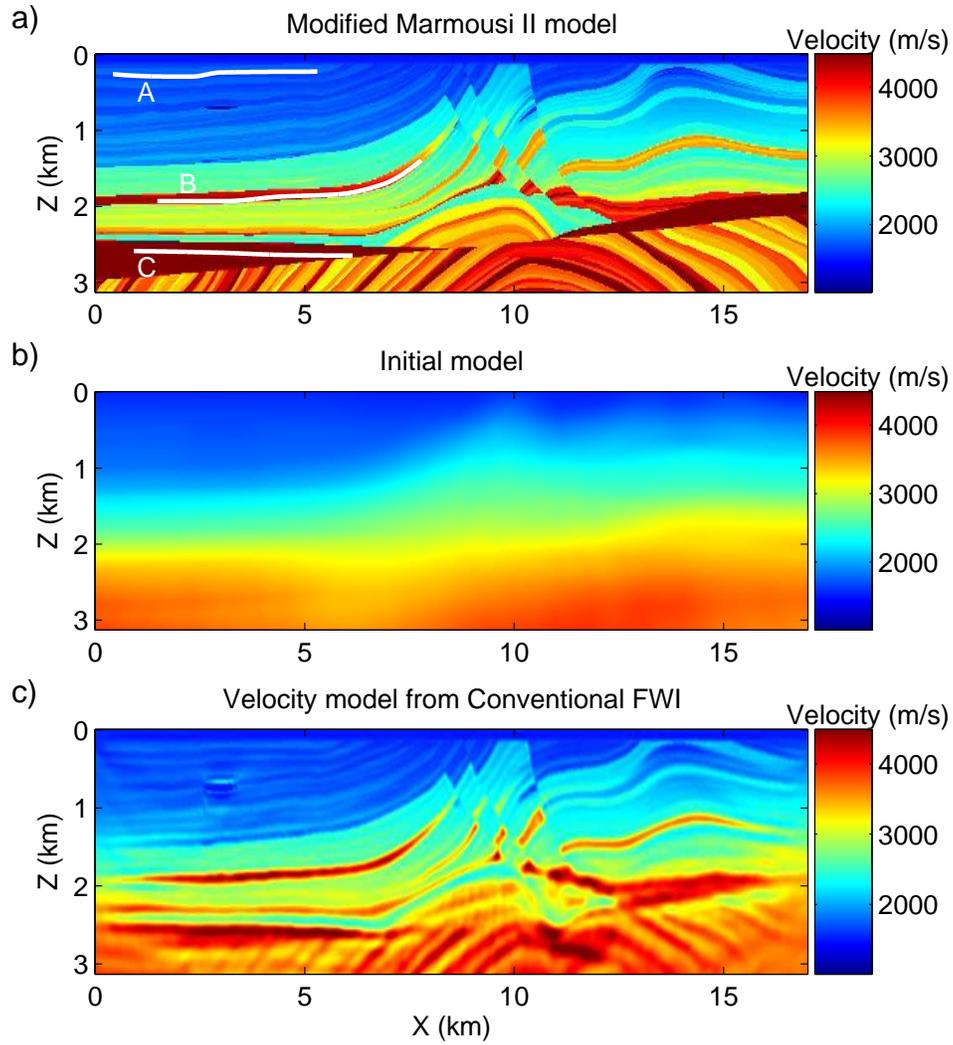


Figure 1: Marmousi P-wave velocity model.

Landes, K. K., 1966, A scrutiny of the abstract, ii: Bulletin of the American Association of Petroleum Geologists, **50**, no. 9, 1992–1999.