REPORT OUTLINE

Following is a brief outline for the contents of a technical report. I suggest you benefit from this outline to the extent possible. I believe adopting this structure (or a similar one) will significantly enhance your communications and facilitate the use of your findings in future studies.

Letter of Transmittal (optional in our case)

Title Page

Summary

The summary should concisely describe your

- Rationale
- Objectives
- Scope
- Accomplishments
- Findings
- Conclusions

Table of content

Introduction

The introduction is a clear statement of the problem at hand and why you are studying it [see, e.g., 1-2]*. The primary purposes of an introduction are to state the subject, the purpose, the scope of the study, and the plan of development of the report. This may include

- Statement of subject (problem definition)
- A concise background on the subject
- Statement of purpose for the study (report)
- Significance of the work
- Pertinent literature to demonstrate continuity
- Scope, limits, and uniqueness of your work
- Plan of development for report

Literature Review

This section should contain an interpretive study of the relevant literature. Attempts should be made to highlight

- Conceptual elements of the topic
- Essential steps of development in the topic
- Contrasting plans of attach
- Limitations and advantages of various methods considered

A good literature review lends support to the rationale for your plan of attack.

Methods

This varies from one project to another and may include

- Theory
- Approach
- Procedures
- Algorithms
- Case studies
- Database used
- Evaluation strategy

Results

Summarize and present your results in a logical manner. Give clear and sufficient detail to justify conclusions. Use tables and figures to illustrate your findings. This may include

- Validation studies
- Evaluation results
- Comparisons

Discussion

- Objectively, highlight the features and limitations of your work.
- Interpret your results in the light of your original intent.
- State the implications of your results.
- Discuss your success and failure in achieving your objectives for the study.
- If you have not resolved the problem completely, suggest further studies.

Conclusions and Recommendations

- State major conclusions that are supported by the results and discussion. Do not repeat your discussion.
- State your recommendations as action items. These are things to do.

Nomenclature

All symbols appearing in your text should be defined and given appropriate units.

References

Document the all literature you benefited from directly. By given due credit to previous works (a) you give more credibility to your work, and (b) you highlight your contributions.

References should be listed numerically in the order of their appearance in the report.

Example:

"This model was first introduced by Park [1]. Several modifications have been introduced to improve the quality of the predictions [2-5]; however, more recently Lee et al. [6] concluded that the original model is actually more suitable for normal fluids."

1. Park, J., "A New Model for Viscosity Prediction," Fluid Phase Equilibria 16, 151 (1984). *[Journal]*

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6. Lee, R.C., R. D. Tall, and S.N. Fast, "Experimental Design in Engineering," McGraw Hill, New York, 121 (1988). *[book]*

Bibliography

Useful reference material of importance in the area of study, such as text books and general sources of information.

Appendices

A. Supporting material

B. Software

- Clear statement of purpose, approach and source
- Sufficient documentation to assist user
- Case study to validate proper use of software
- Labeled copy of software

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*1. Dodd, J. S., "The ACS Style Guide," American Chemical Society, Washington, D.C., (1986).

2. Mills, G.H., and J. A. Walter, "Technical Writing," Fifth Ed., Holt Rinehart and Winston, New York, (1986).