

## PREFACE

This Dissertation Volume 2 consists of Case Studies and Appendices. There are five case studies on building system selection which are: high-rise building column selection, wall system selection, highway guardrail selection, support bridge selection, and building energy system selection. Each of case studies discusses the process of value-based group decision. It applies the algorithm of coalition for negotiation. The process starts with function analysis followed by life cycle cost analysis, building system decision, satisfying options of solution techniques on value criteria, agreement options and coalition, similarity index analysis, and conclusion of each case study.

There are four appendices in this report. Case studies are discussed in Appendix A. Appendix B is about the Analytical Hierarchy Process (AHP) calculation and evaluation. Appendix C is about the survey report on negotiation styles and negotiation outcomes. Appendix C reports the result of survey from both Indonesia and Malaysia data. It consists of descriptive statistics and analytical statistics using multiple regressions. The last appendix (appendix D) is the list of publications produced by the research.

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