

An analysis of group decision justification and its
implications for GSS use and design ideals
**AN ANALYSIS OF GROUP DECISION JUSTIFICATION
AND ITS IMPLICATIONS FOR GSS USE
AND DESIGN IDEALS**

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Submitted in fulfillment of the requirements for the degree
Philosophiae Doctor (Information Technology)

in the

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at the

University of Pretoria

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Pretoria, South Africa

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by

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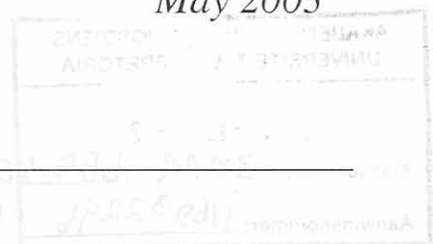
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May 2003



I declare that

Acknowledgements

An analysis of group decision justification and its implications for GSS use and design ideals

Is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

LJ Phahlamohlaka

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 2. The Department of Information Systems for the help and support during the course of my study.
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In making decisions, individuals are often faced with complex situations that require the input of multiple stakeholders. Group decision-making is a process where individuals from different backgrounds and perspectives come together to discuss and deliberate on a problem. This process can be enhanced by the use of Group Support Systems (GSS), which provide a structured environment for group decision-making. This research aims to explore the use of GSS in group decision-making and its implications for design ideals.

A multi-focus research method is used to explore the use of GSS in group decision-making. The research is conducted at a hermeneutic and multiple levels of analysis of the social, organisational, and technical framework and analysis of GSS use in groups.

Drawing on practical philosophy, critical systems thinking, and social practice, a decision justification social practice is proposed. A social practice model is developed to describe group decision justification schemes on the basis of which a group decision justification support system could be designed and developed. The design of the proposed prototype support system opens up new research directions and themes with a focus on providing an thinking patterns and interpretive approaches to GSS applications. It is concluded that the

Abstract

An analysis of group decision justification and its implications for GSS use and design ideals

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In making decisions, modern organisations increasingly rely on groups. The processes that such groups go through in arriving at those decision are very complex. The complexity of these processes mean that irrespective of the level of expertise of each group member, it may be difficult for groups to describe and explain to others the audit trail of their decision process. This thesis argues for and demonstrates that the introduction of the concept of justification to group decision-making substantially enhances our understanding of this complex process.

A multi-theoretic framework is used at three levels of analysis - the systemic, hermeneutic and interpretive levels of data obtained through a process-based research framework and transcripts of GSS use sessions.

Drawing on practical philosophy, critical systems thinking and hermeneutics, a decision justification social practice is proposed - a social practice that determines and prescribes a group decision justification schema on the basis of which a group decision justification support system could be designed and developed. The design of the proposed justification support system opens up new research avenues and aligns with current perspectives on thinking patterns and interpretive approaches to GSS research. In turn, the group decision

justification schema informs and directs the *justification social practice*. The result is a *group decision justification framework*.

Chapter 1

This research was conducted as follows: The literature and the nature of the research topic pointed us to the appropriate research methodology. Two sets of primary research questions together with secondary questions were raised using a process-based research framework. A research framework which guided the research as a whole was then developed and a detailed theoretical grounding of the research framework and how it would be used to further guide the analysis was presented. Empirical data was then collected and analysed in an interpretive way informed by the multi-theoretic analysis framework embedded within a hermeneutic circle. From the theoretical and empirical analyses emerged a decision justification social practice and a decision justification schema, which together constitute the final group decision justification framework. The evaluation of the study, limitations as well as areas of further research are discussed in conclusion.

Decision justification framework, Group decision-making, Group Support Systems(GSS), GSS design ideals, Interpretive information systems research, Systemic-hermeneutic-interpretive framework, Decision justification social practice, Practical philosophy, Grids of Interpretation, Framework Schemes.