

TABLE OF CONTENTS

1. INTRODUCTION TO RULE-ORIENTED PROGRAMMING IN LOOPS	15
1.1 Introduction.....	15
1.2 Basic Concepts	16
1.3 Organizing a Rule-Oriented Program.....	17
1.4 Control Structures for Selecting Rules	18
1.5 One-Shot Rules.....	22
1.6 First-Last Rules	23
1.7 Saving an Audit Trail of Rule Invocation	23
1.7.1 Motivations and Applications.....	23
1.7.2 Overview of Audit Trail Implementation.....	24
1.7.3 An Example of Using Audit Trails.....	24
1.8 Comparison with Other Rule Languages	26
1.8.1 The Rationale for Factoring Meta-Level Syntax	26
1.8.2 The Rationale for RuleSet Hierarchy.....	27
1.8.3 The Rationale for RuleSet Control Structures	28
1.8.4 The Rationale for an Integrated Programming Environment.....	29
2. THE RULE LANGUAGE	31
2.1 Language Introduction.....	31
2.2 Kinds of Variables	32
2.3 Rule Forms.....	34
2.4 Infix Operators and Brackets.....	35
2.5 Interlisp Functions and Message Sending	37

2.6 Variables and Properties	38
2.7 Computing Selectors and Variable Names	39
2.8 Recursive Compound Literals	40
2.9 Assignment Statements	41
2.10 Meta-Assignment Statements	41
2.11 Push and Pop Statements.....	42
2.12 Invoking RuleSets	42
2.13 Transfer Calls	43
2.14 Stop Statements.....	43
 3. USING RULES IN LOOPS	 45
3.1 Creating RuleSets	45
3.2 Editing RuleSets.....	45
3.3 Copying RuleSets.....	46
3.4 Saving RuleSets on Lisp Files.....	47
3.5 Printing RuleSets.....	47
3.6 Running RuleSets from LOOPS.....	47
3.7 Installing RuleSets as Methods	48
3.8 Installing RuleSets in ActiveValues	49
3.9 Tracing and Breaking RuleSets.....	50
3.10 The Rule Exec.....	51
3.11 Auditing RuleSets.....	52
3.12 Loading Rules	52
3.13 Known Problems	52