Table of Contents

Introduction 1			
1.1. 1.2.	Antecedents 5 Rules of the Game 10 Elements of Joule Style 12		
2.1. 2.2. 2.3. 2.4. 2.5.	Factorial 22 Fund 23 mple Execution Model 27 roductory Examples 17 Topispatcher 19 Continuous compound interest 21 Factorial 22 Fund 23		
4. Sy 4.1. 4.2. 4.3.	ntax31Lexical Conventions31Expressions33Program Structure34Identifier Scoping35		
5.1. 5.2. 5.3. 5.4. 5.5. 5.6. 5.7. 5.8. 5.9.	nguage Definition 37 Message Plumbing 37 Methodical Servers 45 Procedures 50 Functions and Expressions 51 Conditionals 52 Iteration 54 Exception Handling 56 Standard Protocol 58 Standard Servers 59 Module Programming 61 Parts of a Joule System 62		
6.1. 6.2. 7. Bo	Prarchical Accounts Example		
7.1.	Domania//		

20 Dec 95 DRAFT 1

	Initiation	
7.3.	Export/Import Issues	77
7.4.	Debugging Issues	77
	Interoperability	
0 0-		70
	curity	
	Encapsulation	
	Certification	
	Discretion	
8.4.	Durability	84
9 Re	source Management	85
	Resource Management Fundamentals	
	Primitive Resources	
	Agoric Abstractions	
	Improved Computational Model	
J.4.	improved Computational Woder	
10. Dis	stribution	89
10.1.	Transparency	89
	Failures in Distributed Systems	
	Explicit Distribution	
	Frameworks for Automatic Distribution	
	Off-line Distribution	
_	rsistence	
	Page-Based Persistence	
	Server-Based Persistence	
11.3.	Replay-Based Persistence	93
Δla	nguage Comparison	Δ1
	Language Comparison	
	Operating Systems	
A.2.	Operating Systems	A2
B. BN	IF for Joule Syntax	B1
	BNF Conventions	
B.2.	Forms	B2
	Expressions	
	•	
	tional Arguments	
	Overview	
C.2.	Receiving Messages	C1
C.3.	Sending Messages	C2
C.4.	Other Changes	C2
D En	ergetic Secrets	D1
	Sending Messages	
	Receiving Messages	
	Sealer and Unsealer Types	
	Certifying Requests	
	, , ,	
E. Bil	oliography	E1
Inc	lex	ln-1