# Rotacrypt: Rotational Mechanics as a Cryptographic Primitive

## Teo Honda Scully

#### Abstract

...TBD...

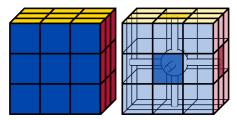
# Contents

1	Introduction			
	1.1	Review of Rubik's Cubes		
	1.2	Scheme Overview		
	1.3	Intended Usage		
<b>2</b>	3x3x3 Implementation			
	2.1	Data Structure Breakdown		
	2.2	Augmented SPEFFZ Mapping		
	2.3	Cyclic Transformations		
3	Key Generation			
	3.1	4-Cube Initialization		
	3.2	Master-Key Serialization		
	3.3	Sub-Key Generation		
4	Encryption			
	4.1	Plaintext Setup With S-Box Transformations On Chunks		
	4.2	Cube Mapping Procedure		
	4.3	Encryption Algorithm		
5	Dec	ryption		

## 1 Introduction

j...i

#### 1.1 Review of Rubik's Cubes



#### 1.2 Scheme Overview

j...i

## 1.3 Intended Usage

j...i

# 2 3x3x3 Implementation

j...i

#### 2.1 Data Structure Breakdown

j...i

### 2.2 Augmented SPEFFZ Mapping

j...i

## 2.3 Cyclic Transformations

# 3 Key Generation

j...i

#### 3.1 4-Cube Initialization

j....j

3.2 Master-Key Serialization j...i **Sub-Key Generation** 3.3 j...i Encryption 4 j...i Plaintext Setup With S-Box Transformations On Chunks 4.1 j...i Cube Mapping Procedure 4.2 j...i **Encryption Algorithm** 4.3 j...i Decryption 5 j...i