Coding Theory

CO 331

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Preface

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Contents

1

Introduction

Coding theory is about clever ways of adding redundancy to messages to allow (efficient) error detection and error correction.

Here is our communication model:

Source	→	Source encoder	→	Encryption/ Authentication	→	Chanel encoder	→	Modulator

e.g., voice, text...   (digital)   Data compression   CO 487   (encoding alg)   CO 331   channel ← noise

Receiver	←	Source decoder	←	Decryption/ Verification	←	Channel decoder	←	Demodulator

(digital)   (decoding alg)