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| 1. | Record Nr. | UNISALENTO991003224009707536 |
| | Autore | Presta, Salvador |
| | Titolo | Salvador Presta |
| | Pubbl/distr/stampa | Milano : Scheiwiller, c1992 |
| | ISBN | 884441192X |
| | Descrizione fisica | 210 p. : ill. ; 30 cm |
| | Disciplina | 709.2 |
| | Lingua di pubblicazione | Italiano |
| | Formato | Materiale a stampa |
| | Livello bibliografico | Monografia |
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| 2. | Record Nr. | UNIORUON00053172 |
| | Autore | CARMICHAEL, Joel |
| | Titolo | The shaping of the Arabs / Joel Carmicheal |
| | Pubbl/distr/stampa | New York, : Macmillan and Company, 1967 |
| | Descrizione fisica | 407 p. ; 25 cm |
| | Classificazione | ARA IV |
| | Lingua di pubblicazione | Inglese |
| | Formato | Materiale a stampa |
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3. Record Nr.	UNINA9910819986703321
Autore	Moreau Nicolas <1945->
Titolo	Tools for signal compression / / Nicolas Moreau
Pubbl/distr/stampa	London, : ISTE Hoboken, N.J., : John Wiley & Sons, c2011
ISBN	9781118616611 1118616618 9781118616628 1118616626 9781299315228 1299315224 9781118616550 1118616553
Edizione	[1st edition]
Descrizione fisica	1 online resource (216 p.)
Collana	ISTE
Disciplina	621.389/3
Soggetti	Sound - Recording and reproducing Data compression (Telecommunication) Speech processing systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Tools for Signal Compression; Title Page; Copyright Page; Table of Contents; Introduction; PART 1. TOOLS FOR SIGNAL COMPRESSION; Chapter 1. Scalar Quantization; 1.1. Introduction; 1.2. Optimum scalar quantization; 1.2.1. Necessary conditions for optimization; 1.2.2. Quantization error power; 1.2.3. Further information; 1.2.3.1. Lloyd-Max algorithm; 1.2.3.2. Non-linear transformation; 1.2.3.3. Scale factor; 1.3. Predictive scalar quantization; 1.3.1. Principle; 1.3.2. Reminders on the theory of linear prediction; 1.3.2.1. Introduction: least squares minimization 1.3.2.2. Theoretical approach 1.3.2.3. Comparing the two approaches; 1.3.2.4. Whitening filter; 1.3.2.5. Levinson algorithm; 1.3.3. Prediction gain; 1.3.3.1. Definition; 1.3.4. Asymptotic value of the prediction gain; 1.3.5. Closed-loop predictive scalar quantization; Chapter 2. Vector

Quantization; 2.1. Introduction; 2.2. Rationale; 2.3. Optimum codebook generation; 2.4. Optimum quantizer performance; 2.5. Using the quantizer; 2.5.1. Tree-structured vector quantization; 2.5.2. Cartesian product vector quantization; 2.5.3. Gain-shape vector quantization; 2.5.4. Multistage vector quantization; 2.5.5. Vector quantization by transform; 2.5.6. Algebraic vector quantization; 2.6. Gain-shape vector quantization; 2.6.1. Nearest neighbor rule; 2.6.2. Lloyd-Max algorithm; Chapter 3. Sub-band Transform Coding; 3.1. Introduction; 3.2. Equivalence of filter banks and transforms; 3.3. Bit allocation; 3.3.1. Defining the problem; 3.3.2. Optimum bit allocation; 3.3.3. Practical algorithm; 3.3.4. Further information; 3.4. Optimum transform; 3.5. Performance; 3.5.1. Transform gain; 3.5.2. Simulation results; Chapter 4. Entropy Coding; 4.1. Introduction; 4.2. Noiseless coding of discrete, memoryless sources; 4.2.1. Entropy of a source; 4.2.2. Coding a source; 4.2.2.1. Definitions; 4.2.2.2. Uniquely decodable instantaneous code; 4.2.2.3. Kraft inequality; 4.2.2.4. Optimal code; 4.2.3. Theorem of noiseless coding of a memoryless discrete source; 4.2.3.1. Proposition 1; 4.2.3.2. Proposition 2; 4.2.3.3. Proposition 3; 4.2.3.4. Theorem; 4.2.4. Constructing a code; 4.2.4.1. Shannon code; 4.2.4.2. Huffman algorithm; 4.2.4.3. Example 1; 4.2.5. Generalization; 4.2.5.1. Theorem; 4.2.5.2. Example 2; 4.2.6. Arithmetic coding; 4.3. Noiseless coding of a discrete source with memory; 4.3.1. New definitions; 4.3.2. Theorem of noiseless coding of a discrete source with memory; 4.3.3. Example of a Markov source; 4.3.3.1. General details; 4.3.3.2. Example of transmitting documents by fax; 4.4. Scalar quantizer with entropy constraint; 4.4.1. Introduction; 4.4.2. Lloyd-Max quantizer; 4.4.3. Quantizer with entropy constraint; 4.4.3.1. Expression for the entropy; 4.4.3.2. Jensen inequality; 4.4.3.3. Optimum quantizer; 4.4.3.4. Gaussian source; 4.5. Capacity of a discrete memoryless channel; 4.5.1. Introduction; 4.5.2. Mutual information

Sommario/riassunto

This book presents tools and algorithms required to compress/uncompress signals such as speech and music. These algorithms are largely used in mobile phones, DVD players, HDTV sets, etc. In a first rather theoretical part, this book presents the standard tools used in compression systems: scalar and vector quantization, predictive quantization, transform quantization, entropy coding. In particular we show the consistency between these different tools. The second part explains how these tools are used in the latest speech and audio coders. The third part gives Matlab programs simulating t
