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[1]:

$$C = \frac{N_2}{N_1}, \quad (1)$$

N_1 N_2 — ,

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[1]:

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[2].

(), (N , K . $N \times$) [2].

$$R(B) = 1 - \frac{H(B)}{H(B)_{\max}} \quad (4)$$

[2].

b_i

$P(b_i)$,
 $L(b_i)$

$$\hat{L}(B) = \sum_{i=1}^I L(b_i) \cdot P(b_i) \quad / \quad (2)$$

B -

b_i

$P(b_i)$

[2].

1,5-3

- 8-12

$$H(B) = - \sum_{i=1}^I P(b_i) \cdot \log_2 P(b_i) \quad / \quad (3)$$

[1].

$$H(B) \geq 0, \quad P(b_i) \in [0, 1].$$

(3)

$P(b_i)$

. 1 [3].

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" " " , "	CM, DMC, PPM	CMBZ, pre-conditioned PPMZ	LZ, LZH LZW	ST, BWT
" " " , "	HUFF	HUFF	SEM, VQ, MTF, DC, SC, DWT	DCT, FT,
" "			RLE, LPC,	PBS, ENUC

" "	ARIC	ARIC		
CM (Context Modeling) –			1	(,
DMC (Dynamic Markov Compression) –				
PPM (Prediction by Partial Match) –		(CMBZ)	"pre-conditioned PPMZ"	
LZ- LZ77, LZ78, LZH, LZW				(,
PBS (Parallel Blocks Sorting) –				
ST (Sort Transformation) –		PBS).		
BWT (Burrows-Wheeler Transform) –				
ST).				
RLE (Run Length Encoding) –				
HUFF (Huffman Coding) –				
SEM (Separate Exponents and Mantissas) –				" "
UNIC (Universal Coding) –				
SEM).				
ARIC (Arithmetic Coding) –			R-	" "
RC (Range Coding) –) [3].	
(
DC (Distance Coding) –				
IF (Inversion Frequences) – "				"
(DC).				
MTF (Move To Front) – "			[3]:	
" ENUC (Enumerative Coding) –			1. ("	-
FT (Fourier Transform) –				, LZ-
DCT (Discrete Cosine Transform) –				
FT).				
DWT (Discrete Wavelet Transform) –				, RLE, LPC, DC, MTF, VQ, SEM, Subband
				Coding, Discrete Wavelet Transform –
LPC (Linear Prediction Coding) –				"
- , ADPCM (Adaptive Differential Pulse-Code Modulation,				Linear
-), CELP (Code Excited				Prediction Coding.
Linear Prediction,				
) MELP (Mixed-				
Excitation Linear Prediction,				
)).				

2.

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" "

" "

LZ.

" " " " -

3.

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("BlockSorting"- : ST, BWT, PBS), [4].

Fourier Transform, Discrete Cosine Transform,

, Enumerative Coding.

[3].

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[4].

("ta", "he", " " . . .)

("xa", "hz", "qe" . . .) -

(),

[4].

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[4].

30.11.2012

DATA COMPRESSION METHODS IN COMPUTER SYSTEMS

V.V Hurin, L.A. Shuvalova

The theoretical concepts of data compression methods (types of evaluations of the provided information effectiveness, types of redundancy, Claude Shannon's information theorem) are reviewed. The research of the classification of the main data compression methods based on the operational principles and the processing data type is conducted, the result is described in a table. The description of three basic data compression strategies (flow transformation strategy, statistical strategy and block converting strategy), that are used by all practical compression methods in computer systems, is submitted. The compression features of different types of information (text, images, video and audio) are presented.

Keywords: data compression method, lossless compression, lossy compression, entropy, redundancy, data compression strategy, text compression, image compression, video compression, audio compression.