List of Acronyms

CWT	:	Continuous-time Wavelet Transform
DCT	:	Discrete-time Cosine Transform
DFT	:	Discrete-time Fourier Transform
DWT	:	Discrete-time Wavelet Transform
EZW	:	Embedded Zerotree Wavelet
FOII	:	First-order Interchannel Interaction
FIR	:	Finite Impulse Response (filter)
GD	:	Gibbs Distribution
KL	:	Karhunen-Lóve
LIP	:	List of Insignificant Pixels
LIS	:	List of Insignificant Set
LSP	:	List of Significant Pixels
MAP	:	Maximum *a posteriori*
MMSE	:	Minimum Mean Square Estimation
MRA	:	Multi-Resolution Analysis
MRF	:	Markov Random Field
MRME	:	Multi-Resolution Motion Estimation
MSAD	:	Multiresolution Sum of Absolute Differences
NI	:	Non-Interaction
PR-QMF	:	Perfect Reconstruction Quadrature Mirror Filter
PSF	:	Point Spread Function
PSNR	:	Peak Signal to Noise Ratio
QMF	:	Quadrature Mirror Filter
RGB	:	Red-Green-Blue (color/color coordinate)
RLC	:	Run Length Coding
SA	:	Simulated Annealing
SAD	:	Sum of Absolute Difference
SAQ	:	Successive Approximation Quantization
SNR	:	Signal to Noise Ratio
SPIHT	:	Set Partition in Hierarchical Trees
STFT	:	Short Time Fourier Transform
SVD	:	Singular Value decomposition

List of Symbols

$y(.,.)$	:	observed -degraded image pixel at location $(,)$
$x(.,.)$	:	original image pixel at location $(,)$
$h(.,.)$	:	Point Spread Function
$n(.,.)$	:	noise value at location $(,)$
X, Y	:	Lexicographically ordered vectors of x and y respectively
$\mathbf{H}$	:	PSF matrix formed from $h(,)$
L	:	A square lattice
η	:	neighborhood system
M	:	Size of a lattice
S	:	Subset
c	:	clique
$\mathcal{C}$	:	set of all cliques
$P[X = x]$	:	Probability
$P[. \mid .]$	:	Conditional Probability
Z	:	Normalizing function
T	:	Temperature
$U()$	:	*a priori* energy function
$U_p()$	:	*a posteriori* energy function
$\mathbf{R}$	:	Auto-correlation matrix
$\psi()$	:	prototype mother wavelet function
$L^2(I\!R)$	:	space of square integrable functions
$\Psi()$	:	Fourier Transform of $\psi()$
$\mathbf{Z}$	:	Set of integers
$f()$	:	function
$\phi()$	:	Scaling function
V_j	:	j^{th} subspace in MRA
W_m	:	orthogonal complement of V_j in V_{j-1}
$\oplus$	:	Direct sum
V_{j-1}	=	$V_j \oplus W_m$
E	:	Expectation operator
$\mathbf{D}$	:	Decimation matrix
$\lfloor . \rfloor$	:	floor operator
$D_{(.)}(,)$	:	Decay parameter
$\mathbf{\Phi}$	:	KLT matrix
Ω	:	Search area

${}^{k}b_{p}^{g}$	:	k^{th} macro block of p^{th} video frame of size $g \times g$
${}^{k}B_{p}^{g}$	:	Discrete orthogonal Transform of ${}^{k}b_{p}^{g}$
$\mathcal{O}(,)$	:	set of ofspring nodes
$\mathcal{D}(,)$	:	set of all descendants
$\mathcal{L}(i,j)$	=	$\mathcal{O}(i,j) - \mathcal{D}(i,j)$
$\mathcal{H}$	:	coordinates of all spatial orientation tree roots
$S_n(,)$	:	Function indicating presence of non-zero motion vector in a set of coordinates $(,)$
θ	:	Threshold
v, h	:	Vertical and horizontal line fields
V_c	:	Clique potential
κ	:	Sample space
μ	:	Smoothness in MRF energy function
γ	:	Penalty term in MRF energy function
w	:	Motion vector
$\mathbf{0}$	:	null matrix

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