Errata for
VIDEO PROCESSING AND COMMUNICATIONS
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Symbols Used
Ti = i-th line from top; Bi = i-th line from bottom; Fi = Figure I, TAi = Table i,
Pi=Problem i,E(i)=Equation(i), X -> Y = replace X with Y

Entries as of 6/12/2002

Page	Line/Fig/Tab	Corrections
16	F1.5	Add an output from the demultiplexing box to a microphone at the bottom of the figure.
48	B6, E(2.4.4)-E(2.4.6)	Replace "v_x", "v_y" by "\tilde v_x", "\tilde v_y"
119	E(5.2.7)	C(X)->C(X,t),r(X)->r(X,t),E(N)->E(N,t)
125	F5.11	Caption: "cameras"-> "a camera", "diffuse"-> "ambient"
126	T7	"diffuse illumination"-> "ambient illumination"
133	B10	T_x,T_y,T_z -> T_x,T_y,T_z, and Z
	B4	Delete "when there is no translational motion in the Z direction, or"
	B2	"aX+bY+cZ=1" -> "Z=aX+bY+c"
	Before E(5.5.13)	Add "(see Problem 5.3)" after "before and after the motion"
138	P5.3	"a planar patch" -> "any 3-D object", "projective mapping"->Equation (5.5.13)"
	P5.4	"Equation 5.5.14"-> "Equation (5.5.14)", "aX+bY+cZ=1"-> "Z= aX+bY+c"
143	T4	After "true 2-D motion." Add "Optical flow depends on not only 2-D motion, but also illumination and object surface texture."
159	T6	After "block size is 16x16" add ", and the search range is 16x16"
189	P6.1	"global"->"global-based"
190	P6.12	Add at the end "Choose two frames that have sufficient motion in between, so that it is easier to observe the effect of motion estimation inaccuracy. If necessary, choose frames that are not immediate neighbors."
199	T9	"Equation (7.1.11) defines a linear dependency … straight line." -> "Equation (7.1.11) says that the possible positions **x'** of a point **x** after motion lie on a straight line. The actual position depends on the Z-coordinate of the original 3-D point."

200	B8	"[A]" -> "[A]^T [A]"
214	P7.5	"Derive"-> "Equation (7.1.5) describes"
		Add at the end "(assuming F=1)"
	P7.6	Replace "\delta" with "\bf \delta"
218	F8.1	"Parameter statistics" -> "Model parameter statistics"
247	F8.9	Add a box with words "Update previous distortion \\ D_0=D_1" in the line with the word "No".
255	F8.14	Same as for F8.9
261	P8.13(a)	"B_l={f_k, k=1,2,…,K_l}" -> "B_l, which consists of K_l vectors in {\cal F}"
416	TA13.2	Item "4CIF/H.263" should be "Opt."
421	TA13.3	Item "Video/Non-QoS LAN" should be "H.261/3"
436	T13	"MPEG-2, defined" -> "MPEG-2 defined"
443	T10	"I-VOP"->"I-VOPs", "B-VOP"-> "B-VOPs"
575	P1.3	"red+green=blue"-> "red+green=black"
	P1.4	"(1.4.4)" -> "(1.4.3)", "(1.4.2)" -> "(1.4.1)"

Entries added 11/15/2002

268	E(9.1.14)	Change to "\sum_{n \in {\cal N}} E\{ s_n^2 \}= \sum_{ k \in {\cal N}} E\{ t_k^2 \}"
	Below E(9.1.14)	Remove the sentence "where … are the variances of ${\cal S}_n$ and ${\cal T}_k$, respectively." Remove parenthesis enclosing the following sentence.
	E(9.1.16)	Change to "E\{ | {\cal E}_K |^2 \}= \sum_{ n \in {\cal N}} E\{ e_n^2 \} = \sum_{k=K+1}^N E\{ t_k^2}"
	B2	"variances" -> "energy"
502	B1 in Sec.14.5.3	"mission data"-> "missing data"

Entries added 10/06/2004

7	Footnote 1	Delete the footnote about HSI and HSV. (they are actually different)
31	P1.7	Add "with equally spaced harmonic lobes" after "nearly periodic"
41	Line 4 after E(2.3.5)	Delete the last sentence "If the spatial signal … therefore, …(3,4)."
42	B4	Any video system is ultimately --> Video systems are mostly
51	P2.2	Add "horizontally with speed v_x" after "moving", in line 2; Add "and its spectrum" after "by the camera" in the last line.
52	P2.6	Maximum spatial frequency of (f_x,f_y)=(3,4) -> spatial frequency components at (f_x,f_y)=(3,4) and (-3,-4)
59	T10	when we discussion → when we discuss
61	E(3.2.6)	n and m should be in bold face, "$\mathbf{x}_m \in \Lambda$" under the second sum sign $->$ "$\mathbf{m} \in Z^K$"
93	T18	Netravali [13] -> Netravali [5]
100	F4.9	Change 60 fps to 30 fps for the output of the last step

102	F4.10(d)	Arrow for H_3=0 should be pointing to the non-shaded region
104	F4.13	In the caption, reference [13] -> [5]
114	B2	"[16]" -> "[16], named after the four vectors defining the camera orientation, "
123	E(5.3.8)	"±1"->"1"
123	1 line below E(5.3.10)	"on the object surface"->"on the object"
123	4 lines above E(5.3.11)	"representation. This"->"representation. This large translation vector may cause problems when estimating motion parameters. This"
124	T1	"rigid if" ->"rigid if the distance between any two points of the object remains constant under motion. Then
199	Below E(7.1.14)	**"T≠0"-> "T≠0"**
200	Line 4	**"T≠0"-> "T≠0"**
204	2Lines above E(7.2.3)	"Δx"-> "Δx"
206	E(7.2.9)	"g bar sub 1" -> "g bar sub x"
231	T6	"rate Rrequired" → add a space after "R"
239	5 lines above E8.4.3	$q_l = \sum_{k=1}^{l} p_l \rightarrow q_l = \sum_{k=1}^{l} p_k$
240	F8.6	In the u_n of the first column: 1=(1000000) --> ½=(1000000)
245	2 lines above E(8.5.15)	"rather"->"other"
271	T5	log N --> log_2 N
281	E(9.1.71)	$\lambda \rightarrow \lambda_k$
289	T9	power spectrum density --> power spectral density
290	T2	Let $\psi(m,n)$ -> Let $\psi(\cdot,\cdot)$
295	T20	In all the video --> In all of the video
299	F9.16	remove "(a)" in the beginning of the caption
434	F13.23	Caption: layers to do --> layers do
436	Table 13.5	The correct table is

Table 14.5. Profiles and levels in MPEG-2 defines allowable picture types (I,P,B), pels/line and lines/picture, picture format, and maximum bitrate (for all layers in case of scalable bitstreams).

Level		Simple (I,P) (4:2:0)	Main (I,P,B) (4:2:0)	SNR (I,P,B) (4:2:0)	Spatial (I,P,B) (4:2:0)	High (I,P,B) (4:2:0; 4:2:2)	Multiview (I,P,B) (4:2:0)	4:2:2 (I,P,B) (4:2:0, 4:2:2)
Low	Pels/line			352	352		352	
	Lines/frame			288	288		288	
	Frames/s			30	30		30	
	Mbit/s			4	4		8	
Main	Pels/line	720	720	720		720	720	720
	Lines/frame	576	576	576		576	576	512/608
	Frames/s	30	30	30		30	30	30
	Mbit/s	15	15	15		20	25	50
High-1440	Pels/line		1440		1440	1440	1440	
	Lines/frame		1152		1152	1152	1152	
	Frames/s		60		60	60	60	
	Mbit/s		60		60	80	100	
High	Pels/line		1920			1920	1920	1920
	Lines/frame		1152			1152	1152	1152
	Frames/s		60			60	60	60
	Mbit/s		80			100	130	300

442	F13.30	Add "VO" on the top of the right most image
444	T15	Equation 5.5.14 --> Equation (5.5.14)
444	T20	detail --> details
447	T27	can by --> can be
464	T14	Equation 5.5.14 --> Equation (5.5.14)
464	T15	Equation 5.5.19 --> Equation (5.5.19)
480	F14.5	data to from --> data to
492	B10	Reed-Solumn --> Reed-Solomon

496 F14.10 Output from the middle branch: $\hat{A}_c, \hat{B}_c \rightarrow \hat{A}, \hat{B}$;

outputs from bottom branch: $\hat{A}_c, \hat{B}_c \dashrightarrow \hat{A}_D, \hat{B}_D$

575 P1.3 "red+green=blue"-> "red+green=brown"

576 P3.7(c) The constant $\dfrac{4\pi}{\sqrt{3}\alpha} \rightarrow \dfrac{2\sqrt{2\pi}}{\sqrt{3}\alpha^2}$

Entries added 3/13/2015

149 E(6.2.3)-E(6.2.7) All instances in this page of $\dfrac{\partial \psi_1}{\partial x}$ should be replaced by $\dfrac{\partial \psi_2}{\partial x}$