Errata for the Book "Multimedia Signals and Systems"

Last updated: Oct 4, 2006

Chapter	Page#	Corrections
3	41	"Example 5.1" should be changed to "Example 3.1"
3	52	"Example5.2" should be changed to "Example 3.2"
4	62	Table 4.1/Column 3/Row-5: "2900" should be changed to "2999"
4	64	Example 4.2: Delete "Case 1"
4	66	Last sentence: "minimum sampling rate of 64 dpi" should be changed to "minimum scanning resolution of 64 dpi"
4	73	Eq. 4.18: "$e(nT) = f(nT) - \hat{g}(nT)$" should be changed to "$e(nT) = g(nT) - \hat{g}(nT)$"
4	74	Last Paragraph: "shown in Fig 4.1(a)" should be changed to "shown in Fig 4.1(a)"
4	75	Second last line: "quality of the image" should be changed to "quality of the image"
4	77	Example 4.6, line 4: "Fig 7.3 (a)" should be changed to "Fig. 4.14(a)"
4	79	Section 4.5, 2nd paragraph: "Fig. 4.16 shows the Lena image with 24 bits/pixel resolution." should be changed to "The Lena image with 24 bits/pixel resolution is provided in the attached CD."
5	86	The equation before last paragraph should be as follows (there are two missing *e*'s) $$\begin{bmatrix} f(0) \\ f(1) \\ f(2) \\ f(3) \end{bmatrix} = 10 * \begin{bmatrix} 1 \\ 1 \\ 1 \\ 1 \end{bmatrix} + (-2.5 + j0.5) * \begin{bmatrix} 1 \\ e^{\frac{j2\pi}{4}} \\ e^{\frac{j4\pi}{4}} \\ e^{\frac{j6\pi}{4}} \end{bmatrix} - 1 * \begin{bmatrix} 1 \\ e^{\frac{j4\pi}{4}} \\ e^{\frac{j8\pi}{4}} \\ e^{\frac{j12\pi}{4}} \end{bmatrix} + (-2.5 - j0.5) * \begin{bmatrix} 1 \\ e^{\frac{j6\pi}{4}} \\ e^{\frac{j12\pi}{4}} \\ e^{\frac{j18\pi}{4}} \end{bmatrix} = \begin{bmatrix} 2 \\ 5 \\ 7 \\ 6 \end{bmatrix}$$
5	96	Last paragraph: "if we want to design a lowpass filter with a cutoff frequency of 3200 Hz for an audio signal sampled at 8000 samples/sec, the cutoff frequency will be 3200/8000 or 0.4" should be changed to "if we want to design a lowpass filter with a cutoff frequency of 1600 Hz for an audio signal sampled at 8000 samples/sec, the normalized cutoff frequency will be 1600/(8000/2) or 0.4"
5	101	1st paragraph: "(i.e., $\widetilde{h}(n)$, $\widetilde{h}(n)$, $\widetilde{h}(n)$))" should be changed to "(i.e., $\widetilde{h}(n)$, $g(n)$, $\tilde{g}(n)$))"
5	101	Example 5.6: "similar to example 5.4" should be changed to "similar to example 5.5"
6	124	1st paragraph: "on average 80 spaces" should be changed to "on average 80 characters"
6	124	Section 6.2, 2nd paragraph: "… a larger number of bits…" should be changed to "… a smaller number of bits…"
6	126	Line 1: "p(a)=6/21=0.27" should be changed to "p(a)=6/22=0.27"
6	126	Line 4: "The average information carried" should be changed to
6	126	Paragraph 6: "A total of K^N possible audio patterns" should be changed to "A total of K^N possible text patterns"
6	127	Line 2: "… a large number of audio patterns" should be changed to "… a large number of test patterns"
6	129	Para 6: "(see Problem 9)" should be changed to "(see Problem 6.9)"
6	130	Last line: "only four symbols instead of five" should be changed to "only five symbols instead of six"
6	133	Paragraph 1: "(see Problem 16)" should be changed to "(see Problem 6.16)"

7	146	Definition of Statistical redundancy: "… a larger number of bits…" should be changed to "… a smaller number of bits…"
7	150	Paragraph 2: "…shown in Fig 4.14." should be changed to "…shown in Fig 7.4."
7	153	Eq. (7.4) should be $\sum_{i=1}^{M} \alpha_{i,opt} R(\lvert j-i \rvert) = R(j), \quad 1 \le j \le M$ In expanded form, the equation will look like: $\begin{bmatrix} R(0) & R(1) & \dots & \dots & R(0) \\ R(1) & R(0) & \dots & \dots & R(1) \\ R(2) & (1) & \dots & \dots & R(2) \\ \dots & \dots & & & \dots \\ R(M-1) & R(M-2) & \dots & \dots & R(0) \end{bmatrix} \begin{bmatrix} \alpha_{1,opt} \\ \alpha_{2,opt} \\ \alpha_{3,opt} \\ \dots \\ \alpha_{M,opt} \end{bmatrix} = \begin{bmatrix} R(1) \\ R(2) \\ R(3) \\ \dots \\ R(M) \end{bmatrix}$
7	153	Fig. 7.7 caption: "$\hat{e}(n)$: prediction error" should be changed to "$\hat{e}(n)$: quantized prediction error"
7	154	2nd order predictor matrix: $R(-1)$ should be changed to $R(1)$
7	154	3rd order predictor matrix: All $R(-1)$ should be changed to $R(1)$ and $R(-2)$ should be changed to $R(2)$
7	157-165	The following figure numbers should be changed in the respective figure captions. Figure 7.6 (page 157) → Figure 7.10 Figure 7.6 (page 158) → Figure 7.11 Figure 7.8 (page 160) → Figure 7.12 Figure 7.9 (page 161) → Figure 7.13 Figure 7.10 (page 162) → Figure 7.14 Figure 7.11 (page 164) → Figure 7.15 Figure 7.12 (page 164) → Figure 7.16 Figure 7.13 (page 165) → Figure 7.17
7	157	Para-1: "The bit allocation process is illustrated in Fig. 7.6" should be changed to "The bit allocation process is illustrated in Fig. 7.10" Para 2: "Fig. 7.7 shows the operation…" should be changed to "Fig. 7.11 shows the operation…"
7	159	Para-4: "Fig. 7.8(a)" should be changed to "Figure 7.12(a)" Para-5: "Fig. 7.8(b)" should be changed to "Figure 7.12(b)
7	160	Para-2: "Fig. 7.9" should be changed to "Figure 7.13"
7	161	Para-2: "Fig. 7.10" should be changed to "Figure 7.14"
7	163	Line-1: "Fig. 7.11" should be changed to "Figure 7.15"
7	164	Line-1: "Fig. 7.12" should be changed to "Figure 7.16"
7	165	Paragraph-2: "Fig. 7.13" should be changed to "Figure 7.17"
8	169	Paragraph-4: "… a larger number of bits…" should be changed to "… a smaller number of bits…"
8	170	Paragraph-4, Line-3: "..statistical statistical redundancy" should be changed to "..statistical redundancy"
8	180	Last line: " …that DCT also provides similar information" should be changed to " …that block DCT also provides similar information"
9	228	Paragraph-1: Delete the repeated sentence "The basic coding structure involves shape coding (for arbitrarily-shaped VOs) and motion compensation, as well as DCT-based texture coding (using standard 8x8 DCT or shape adaptive DCT)."

MATLAB Programs in the CD

Folder	File	Corrections
CD:\programs\chap10	Example10_2.m	Insert the following command x=[0:length(signal_eq)-1]/1000 ; just before Line 71: plot(x,signal_eq);