Errata

Introduction to Digital Wireless Communications

Chapter 2

- Page 16, ‘2 GHz’ in the example question should read as ‘5 GHz’. Eq. (2.7) should read as

\[ P_t \geq P_r + 91.5 \text{ dB} = -23 \text{ dBm} + 91.5 = 68.5 \text{ dBm} = 38.5 \text{ dBW}. \]

The power amount under Eq. (2.8) should be ‘52.4 dBW or 173.8 kW’.

Chapter 3

- Page 33, Eq. (2.7) should read as

\[ r_n(t) = \alpha_n(t)A \cos(2\pi f_c(t - \tau_n(t)) + \varphi_n(t)). \]

- Page 36, in the first line, ‘ns’ should read ‘µs’.

Chapter 4

- Page 67, Eq. (2.7) should read as

\[ \gamma_s = \text{SNR} \times B_s T_s = 10 \times 1.2 = 12. \]

The bit error probability value in Eq. (4.38) should be \(4.79 \times 10^{-7}\).

- Page 73, in the first table of the example solutions, the reference symbol should be \(cAe^{j3\pi/4}\) and the second received symbol should be \(cAe^{j5\pi/4}\).

- Page 89, Problem 8, the average channel gain \(2\sigma^2\) should be -6 dB instead of -60 dB.

Chapter 6

- Page 122, in Eq. (6.12), ‘2.31’ should read ‘0.698’. In the following paragraph, \(Q(\sqrt{2 \cdot 2.32}) = 1.78 \times 10^{-2}\) should read \(Q(\sqrt{2 \cdot 0.698}) = 0.115\), ‘2.65’ should read ‘1.14’, \(Q(\sqrt{2 \cdot 2.65}) = 1.78 \times 10^{-2}\) should read \(Q(\sqrt{2 \cdot 1.14}) = 0.0668\).

- Page 134, in the solution to part 1 of the example, the total required bandwidth should be 1.26 MHz, instead of 1.25 MHz.

- Page 140, line 2 from the top, the third transmitted symbol should read \(-0.35e^{j3.14}\).
2 Introduction to Digital Wireless Transmission

Chapter 7

- Page 155, in the solutions to part 2 of the example, it should read $N_0B_s = 0.3$ mW. The SINR in the following linear should be $\gamma = 10/(0.3 + 0.74) = 9.62 = 9.8$ dB.

Chapter 9

- Page 199, Eq. (9.14) should read

$$\eta = 2Pr[15.2 \leq \gamma < 76] + 4Pr[76 \leq \gamma < 319.2] + 6Pr[319.2 \leq \gamma]$$

$$= 2.728 \text{ bps/Hz}.$$