

Advanced Digital Communications (EQ2410)

Period 3, 2016

Assignment 6

Due: Wednesday, Feb. 5, 2014

M. Xiao

Reading assignment

- Madhow, Fundamentals of Digital Communication: chapters 7.4-7.5 (pp. 357-367)

Preparation tasks

Problem 6.1:

- Which parameter limits the performance of a signal-space constellation?
- Give an expression for the error probability (AWGN) of an M -ary signal-space constellation using the nearest neighbor approximation.
- Which of the following two 8-PSK constellations will show a better performance (assuming that $d \ll d_0 = 2 \sin(\pi/8)$)?

