

AE4580 Introduction to Avionics Integration

Spring 2004 Homework #3

Due: Monday February 16, 2004 at 2:05pm (beginning of class) or before

1. Fill in a table of radio navigation sources, with the following horizontal boxes:

What is measured (be specific, e.g. if an angle, which angle)

Accuracy

Coverage (area served)

Capacity (number of users)

Include the following systems in your table:

Marker beacons

Nondirectional beacons

VOR

Doppler VOR

DME

TACAN

Localizer

Glideslope

LORAN-C

2. Problem 5.3 in Kayton & Fried (you may utilize the answer given for problem 5.1, use $x=0$, $y=0$, $z=0$ i.e. center of the Earth, as your initial guess for position, show *all* iterations in tabular form).
3. Extra Research: Identify a non-aerospace use of GPS, and write a 200-300 word description of it. Be prepared to briefly describe it to the rest of the class.