

Assignment 1: Familiarization with Aviation Data Sets on the Web

Date Due: January 31, 2014

Instructor: Trani

Problem 1

Pick one of the following airports and write a one page (double spaced) essay with a brief history of the airport. Use books, the Internet or any other data source. Clearly state you references.

- a) New York Kennedy International Airport, New York
- b) Los Angeles International Airport, California

Problem 2

Airport Statistics using the Bureau of Transportation Statistics (BTS) web site.

Go to the BTS web site (accessible through our page with "[Interesting Web Sites](#)") and look at the following 2 airports using the airport snapshot link: <http://www.transtats.bts.gov/airports.asp>.

- 1) Dallas Fort-Worth International Airport, Texas
- 2) Miami International Airport, Florida

For each airport answer the following questions.

- a) Find the total number of passengers boarding U.S. Flights at the airport in the last two years of data.
- b) Find the market share for the top three airlines operating at the airport (market share means the percent of passengers carried by an airline at the airport).
- c) Find the top 3 destinations from the airport selected. Comment on the destinations.
- d) Comment on the departure delays experienced by aircraft operating at the airport in the past three years and compare them to the national average. Are the on-time performance numbers improving with time?

Problem 3

Airport features using the Airnav.com web site.

Go to the Airnav web site (accessible through our page with "[Interesting Web Sites](#)") and look at the following airports:

- 1) Dallas Forth-Worth (DFW)
- 2) Miami International Airport (MIA)

For each airport create a table with the following data:

- a) Find the number of runways and the runway length and width for each runway at the airport.
- b) Find the elevation of each runway end (in feet). Note: A runway has two runway ends labeled numerically. For example Runway 18/36 indicates the number of degrees from the magnetic North multiplied by 10. So an aircraft landing on runway end 18 would be flying South (180 degrees from the magnetic North).
- c) State which runways at DFW have approach lights at each runway end.

Problem 4

Read the class notes before attempting this part of the homework. Read paragraph 105 in the FAA FAA Advisory Circular AC 150/5300-13A.

Familiarize yourself with Appendix 1 of the FAA Advisory Circular AC 150/5300-13A available on the [main page of our CEE 4674 web site](#) and answer the following questions:

- a) Identify the FAA Airport Design Group (ADG), Taxiway Design Group (TDG) and Aircraft Approach Category (AAC) for the following aircraft: Boeing 737-700, Boeing 777-200LR, Airbus A318, Airbus A330-300, Boeing 747-400 and the Airbus A380-800.

b) Find the ICAO aerodrome reference code for all the aircraft above.