Tutorial #1: Decision Aid Methodology
17th April, 2012

1. Getting started

The aim of this tutorial is to get used to the different tools provided in the APM software suit. We will use only three planning modules, namely SchedulePlanner, TecPlanner and CrewLogic. The first two modules are determining which legs will be flown and if the legs can be assigned to aircraft. SchedulePlanner mainly focuses on airport slot management (obtaining slots at departure and arrival airports). TecPlanner is an extension of SchedulePlanner, as it also considers maintenances of aircraft. Finally, CrewLogic is used for the crew management.

2. SchedulePlanner

SchedulePlanner is a tool that allows building an airline's schedule and asking for airport slots; a communication tool to submit slot requests to airports is embedded in SchedulePlanner (although we are not going to use it!).

To get familiar with SchedulePlanner, perform the following steps:

1. Under Schedule -> Flight Search, search for all flights scheduled on February 16th, 2010.
   I.   How many flights are there? How many different aircraft types are there?
   II.   What is the meaning of "LT at Airport" and "UTC"? Explain the difference.
   III. What is the scheduled flight time for flight 0902 from LCY to GVA? What is the scheduled flight time for flight 0905 from GVA to LCY?

2. Under Schedule -> Flight Statistics, look at the statistics of all flights of January 2010 using aircraft types DH4 and EM9.
   I.   How many flights are there?
   II.   What is the total amount of passenger-kilometers and seat-kilometers for January 2010?
   III. Compute the yield, load factor, unit cost and unit revenue, assuming that each flight costs, in average, 5,000 Euros and has average revenue of 20,000 Euros.
   IV.   How many passengers are flying in business class on aircraft type DH4? How many passengers are flying in economy class on aircraft type EM9?
   V.   On which day of the month is the load factor highest for DH4 aircraft? On which day is it lowest?
   VI.   What is the most visited airport by DH4 aircraft? Which airport is visited least by EM9 aircraft?

3. Under A/C Fleet, find out the difference between Aircraft Types and Company Fleet.
    I.   How many aircrafts are owned by the company?
    II.   What types of aircraft does the airline own?

Note: This tutorial is a modified version of the one prepared by Dr. Niklaus Eggenberg for the "Decision Aid Methodology" course for Spring 2010 session.