Graduate Problem 5.GP

EECS 381/409, Prof. Michael S. Branicky

Problem 5.GP

This problem is worth ”project points”. It is more substantial than a usual graduate problem—and
more open-ended. There is not necessarily a right answer. Also, you are are to attempt this more independently. Don’t ask me “is this good,” but use your own judgment of what is “reasonable.”
Your work should be your own and different than other students’.

All right, that said, you must do the following.

• Start with a hybrid systems problem that you find (not from Problem Set #5 or the HyTech
User Guide) or make up yourself.

• Using HyTech (or any other hybrid systems verification tool you might find), enter in the
code for your system and play with it. In the spirit of Problems 5.5 and 5.6 on Problem Set
#5, design a future Hybrid Systems Homework Problem based on modifying this model.

• You must turn in: (1) a clear writeup of your problem (similar to those above, and including
a textual description, hybrid automaton model (drawing) and formal model (e.g., .hyt file,
if appropriate) and (2) a clear, concise solution to your problem (that would be suitable for
handing out to the class as a solution).

This problem is special and due as follows:

• March 31: your planned problem, hybrid systems tool, and appropriate details. In particu-
lar, you should provide a textual description of the model.

• April 7: your completed problem.

The webpage contains links to Example HyTech projects from previous offerings of EECS 409.
You can look at these for inspiration, but not propose something too close to them.