An Intelligent Interaction Manager Application

As the number of communication channels increase, so should be the opportunities for individuals to interact. Yet, we all fail to interact efficiently. For example, we fail to return important calls, read important messages in time, or resort to a phone call when the person we want to reach is a few feet away. We can attribute the situation to social applications that focus more on *what* to do and *how* to do something, rather than *why* to do it. Your task in this assignment is to build an intelligent *interaction manager* application. In the process, you will document the thought process (i.e., what design decisions you made and why).

The application can access multiple communication channels of the user. Its task is to decides when and how to remind the user of a missed interaction opportunity. The application employs users' contexts in several ways. The following are a few example scenarios.

- A user misses a casual call from a friend during work hours. The interaction manager chooses to remind the user of the call later in the evening. However, if the call is from an important client, the application reminds the user immediately.
- A user missed a call from a friend the previous evening. Today, when the user is jogging in a park, the friend is also jogging in the same park. The application reminds the user of the missed call and the proximity to the friend. Note that there can be privacy concerns that need to handled here.
- A user forgot his phone at home and a friend tries to call him repeatedly. The application knows about the user forgetting the phone and sends an email reminder to the user of the repeated missed calls.

This is not an exhaustive list of possible scenarios. You might realize additional scenarios suitable for intelligent interaction management. If there is an additional scenario you want to incorporate, please discuss with me. However, the crux of the project is not to come up with (and consequently implement) an exhaustive list of features. Instead, your focus should be model precisely 1) what is that you are doing, 2) how you are doing that, and 3) why are you doing it a certain way. In the first phase of the development, you will produce system models that capture the actors, their goals and plans, and dependencies among them. The case study provides ideas to get started on this.

Note that you will implement the application in the following phases. You will also modify the applications to incorporate evolving requirement. So, try to make the modeling a worthwhile activity. A well constructed model makes the implementation and system evolution easier.