With approximately three quarters of the semester finished, our team has made a recent spike in progress that is very promising. While it was slow in the beginning, due to the research involved in learning the previous work accomplished and learning about the various limitations of Second Life, we all have some solid foundation which we will build on in the next month to create a reasonably complete final product.

Some of the progress that our team has made includes:

- Translating a majority of the workflows into Prolog and LISP.
- Creating robots that perform a show, singing common songs (the alphabet, Rick Astley hits, etc.) in time with each other. A “Godbot” was created to tell the robots to compile their scripts and run them, since there are currently only three program buffers.
- The C# code now compiles and is able to login to Second Life and issue commands. Unfortunately, the waypoint system that currently exists does not seem to be working with the application right now.

I have made some progress with the RFID system. I have created a simple room that would act as an “inventory room.” I modified the RFID scanner slightly, so that it will change colors when objects are in range. I also modified the geometry of the scanner, so that the range will be hemispheric and cover the entire room, where before it would only cover about two-thirds of the room. I created some simple objects (boxes and blankets), and the scanner will recognize how many of each object exists in the room at any given moment.

This was all working sufficiently. Unfortunately, at the time of this writing, the RFID tags are
no longer working. They have scripts that will automatically update the RFID tags to the newest
version (so that you don't have to change every object's script). This is very convenient; unfortunately,
someone might have made changes that cause the tags to no longer work. Even the RFID scanner/tags
in the store do not work at the moment.

Assuming that the RFID system is able to be recovered, I am planning on doing several things
before the end of the semester. The scanner's script is able to send information to a server. This has
many benefits, since you are able to manage the information with a much more powerful system and
language than Second Life and LSL. On the other hand, there will be delay every time you wish to
query or update information, and you are also creating another point of failure. An alternative would be
to create a “server” Second Life object, which holds the information about each storage room. This
would be much faster, but I will have to do more research to determine if it will be able to perform all
of the necessary operations.

The other members of my group are planning on finishing the Prolog/LISP translations, and
begin porting them to their Second Life workflow equivalents. As Nick improves the bot language
(adding more program buffers and “assembly-level” functions), our bots will also improve. Also, the
C# code will import the waypoint system, and once a solid foundation is laid, it is expected to gain
functionality quickly.

For my final demonstration, I will have three or four storage rooms. A bot queries the room
about a particular object (“how many blankets?”), and it receives a response (“i have 2 blankets”), so it
can act accordingly. This should be easy to do. I would like to also add more centralization. Ideally, a
bot would be able to simply say “i need x blankets” (not to any room in particular, but the entire
hospital), and it would receive a response of “go to room y,” where room y is the closest room with at
least x blankets. Obviously, this involves much more, and I am not sure how easy it is to perform some
of these functions (such as calculating the distance between two objects) in Second Life. However, that
is my final goal for this term, and I do not believe that it is unreachable.