Notes, ElliotZ

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These are my thoughts for the assignment tasks given the idea of a university transportation system. We will use a few key locations around the U of A to develop and demonstrate our system. The objective is to help busy students better utilize their valuable time. In the future, this system could be scaled to help people plan larger, longer, and more complex travel routes, i.e. flights and shuttles/rentals.

Some of the things we need to start gathering to implement the project:

* List of locations to travel between
  + Straight line distances between (to use as a distance heuristic that always underestimates)
  + Minimum time between (thoughts about this heuristic?)
* Definitions of a few traffic conditions to test against (class change, 5:00 a.m., etc.)
* List of transportation options, and what routes are open to them (what edges connect them between nodes).

1. System Requirements
   1. The time it takes a user to plan a route using our system shall be shorter than the time it takes them to plan a route manually.
   2. The system shall allow the user to prioritize their route for time, distance, etc.
   3. The system shall allow the user to create a profile where they can include disability information that will be used when searching for valid paths.
   4. The system shall accept traffic condition information in order to make more accurate heuristic functions.
   5. The system shall feature a distributed network of transportation options stored at strategic locations around campus.
   6. The system shall implement an AIPS that automatically redistributes the transportation devices at each location according to demand.
2. Overall System Architecture
3. Component Interactions
4. Key Concepts Applied
   1. For the path planning system:
      1. How to make AO\* work? It seems that this will degenerate into regular A\*.
   2. AIPS for redistribution of transportation options.