Visualizing Decision-Theoretic What?

In its simplest terms, this project uses a network of all possible states that one could be in and actions that can be taken at each state to help plan future actions. A state is simply the collection of all of the information about a situation. At each state, different actions can be taken, their results leading to new states. The network also gives the utility of being in a given state. This is often a measure of how beneficial the state is in terms of its advancement to the final goal(s). A plan is the suggested action to take based on the current state and the probability and utility of all possible actions from that state. To date, there have not been any simple, user friendly systems to solve such problems. Our project strives to develop a software package that effectively allows humans to visualize and interact with a decision-theoretic plan.

What can you do with this?

Welfare/Career Guidance

The software aims to help welfare counselors direct their advisees of courses of actions they can take and probable outcomes. This information could add efficiency to the welfare system by aiding the counselors in complex decisions. Since the software will be developed for the counselor’s use and not the advisee’s use, it will not diminish the human element of advising.

Academic Advising

The software will be used as a planning aide for academic advisors. Information about past coursework and student goals such as length to graduation, degree desired, and what the student wants to do after college will help guide the plan. The system’s dynamic interface will allow the counselor to quickly and easily show the student many possible choices and outcomes for their academic career.

... and much, much more!

Work in Progress - Design Concepts