

Crew Scheduling

- Examples of crew scheduling
 - Scheduling worker times for supermarkets, hospitals, department stores, telephone operators, airlines, hotels, restaurants, factories, maintenance staffs, security services, toll collectors, etc.
- The planning horizon is the time into the future during which staffing decisions must be made.
 - It is broken down into time periods: hours, days, shifts, weeks, etc.
- A demand pattern is a list of the number of workers (possibly broken down by job classification) needed during each period of the planning horizon.

A General Crew Scheduling Problem

- We have a demand pattern over a planning horizon and a list of current workers.
- A list of candidate schedules is generated for each worker.
- Each worker can rate the desirability of each of his/her candidate schedules.
- We want to pick one schedule for each worker so that demand is covered and worker satisfaction is maximized.