Canada West oversees the administration of all sports of its 17 university members from British Columbia to Manitoba. The organization is responsible for scheduling the regular season games of the sports of its members and currently does this by hand using ad-hoc methods. Of particular difficulty is the dependency between the basketball and volleyball schedules of universities whose venues only support one of the sports on any given weekend. Also contributing to the difficulty of this dual-sport-venue sports scheduling problem is the desire to balance the home/away status of the teams, to minimize the breaks in the schedules, and to respect the size of local referees pools. In this talk, a solution for this problem using constraint programming is presented along with a discussion of graph factor algorithms used for filtering in global constraints relevant to this problem.

This is joint work with Donovan Hare.