Sets:

- h = home location
- L = possible game locations

Parameters:

- d_{ij} = distance from location i to location j
- n_i = number of games remaining at location i
- m = number of games per road trip

Variables:

- x_{ij} = whether or not to make the trip from location i to location j

While:

$$\sum_{i \in L} n_i > 0:$$

Solve:

$$\text{Min} \sum_{j \in L} \sum_{i \in L} x_{ij} d_{ij}$$

Subject to:

Must make trip out of home arena

$$\sum_{i \in L} x_{hi} = 1$$

Must make trip back to home arena

$$\sum_{i \in L} x_{ih} = 1$$

Must both arrive at and depart from of every arena on a trip

$$\sum_{j \in L} x_{ij} - \sum_{j \in L} x_{ji} = 0 \text{ for all } i \in L$$

The trip cannot consist of simply going back and forth between to arenas (circular trip)

$$\sum_{j \in L} X_{ij} - (X_{it} + x_{ti}) \geq 0 \text{ for all } i \in L, t \in L$$

Total games in the trip must not exceed the maximum limit per trip

$$\sum_{j \in L} \sum_{i \in L} x_{ij} = m$$

You cannot visit a location unless there is a game to play

$$\sum_{i \in L} X_{ij} - n_i \leq 0 \text{ for all } j \in L$$

Deprecate:

$$n_i -= \sum_{j \in L} x_{ji} \text{ for all } i \in L$$

Assumptions:

- Each road trip must be four games or less
- The trip must keep moving after every game (i.e. cannot play in location *y* several times after landing there)

Vancouver Canucks Optimization Results