Ludwig-Maximilians-Universität München   Munich, June 28th, 2017
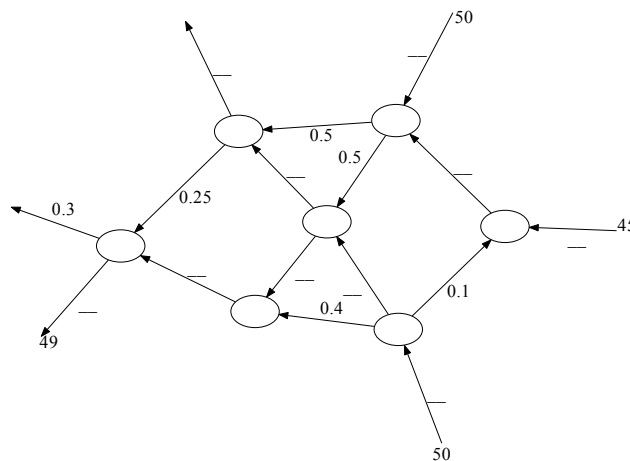**Institut für Informatik**
Prof. Dr. Matthias Schubert
Anna Beer

Managing Massive Multiplayer Online Games
SS 2017

Exercise Sheet 9: Temporal and Spatial Behavior

Discussion: July 5th, 2017

Exercise 9-1   *Homogenous Poisson Models*

The following extract of a road network is given:

Labels of entering edges indicate the number of characters entering the represented area. Labels of the other edges indicate the probability that a character decides upon the corresponding way. Assume that the motion inside the road network follows a homogenous poisson process.

Calculate the missing probabilities and for every edge the expected number of characters who are located at every time on the way represented by the edge.

Exercise 9-2   *Spatial Outlier Detection*

In the following relevant spatial positions (e.g. starting positions in an FPS or frequent camp positions in an MMORPG) are given. For every position a score is given additionally which depicts semantic information about the quality of the position (e.g. the average number of frags in an FPS or the average count of EP/coins per hour in an MMORPG).
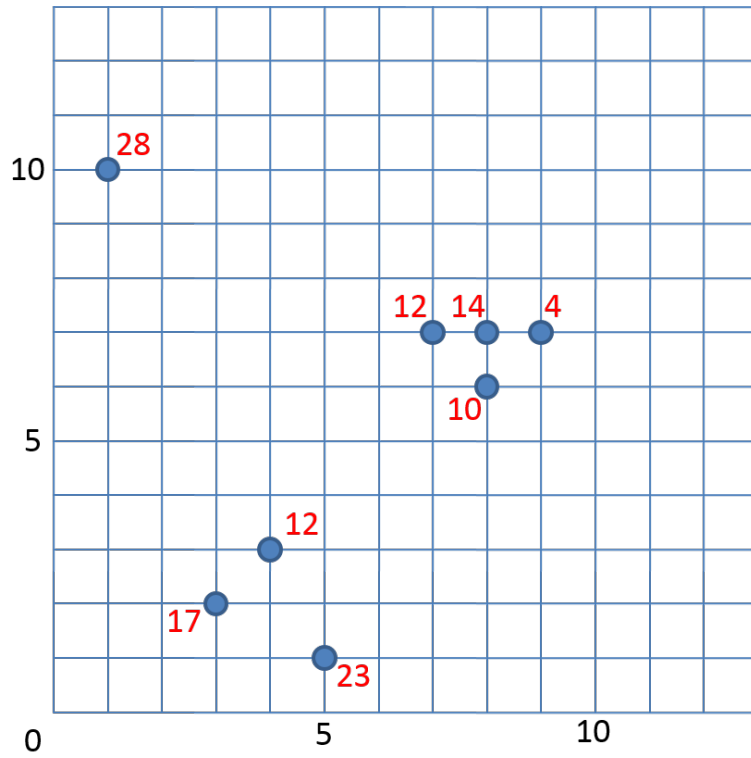
Find the three strongest outliers in this dataset applying the Point Outlier Detection Algorithm with $k = 2$. Use the absolute score difference as weighting function.

Exercise 9-3 *Compression of trajectories*

Approximate the following trajectories with the Douglas Peucker Algorithm

(i)

(ii)

δ