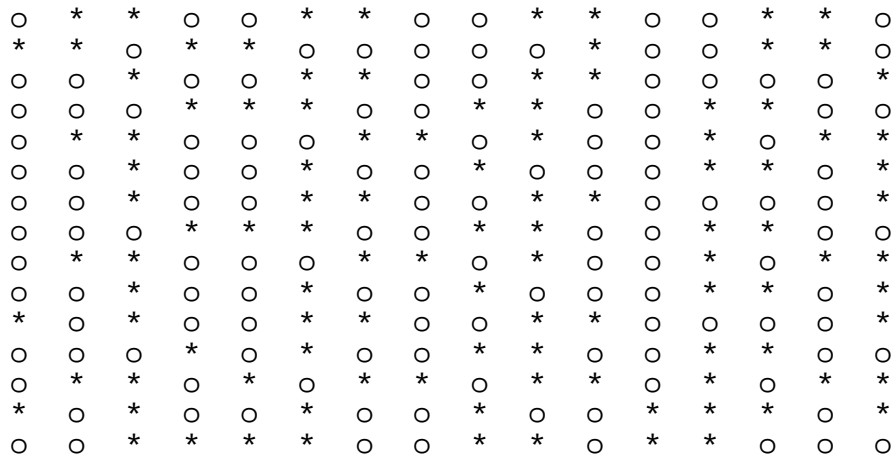


Optimal control of streetlight networks

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Groups of street lights in down town are usually controlled by a single switch. For instance, if the streets are a grid of East – West streets and North – South avenues a single light switch may control all lights along a single street or avenue. The city wants to save energy while the police would like to maintain as much lights as possible.

Every day the chief of police may give the city a list of intersections he wants to be lighted. For instance the following drawing shows a grid of a city with intersections marked by * to be lighted.



Our goal is to minimize the number of light switches to be turned on yet meeting the police chief requests. Different possible "banks" of lights may require different algorithms.