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*Time constrained searching and sweeping*

Graph searching and graph sweeping are often used as real world models in which mobile agents move to capture a mobile intruder. In graph searching, the intruder can only be located on vertices, while in graph sweeping, the intruder can also be located on edges. The most common problem examined with these models is to find the fewest agents which can guarantee the intruder's capture. However, in some situations, agents are "cheap", and we may then insist the intruder be captured quickly. We examine several such cases in variations of the the graph searching and sweeping models.