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Dynamic Perimeter Movement Using UAVs and Robotic Systems

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Title: Dynamic Perimeter Movement Using UAVs and Robotic Systems

Abstract: For this study, we propose a Dynamic Perimeter Movement system that has a user-operated UAV to identify GPS coordinate points using land markers such as April Tags. These markers would be used to identify the perimeter of a road work zone. Once the work zone is determined, autonomous robotic traffic cones would disperse to position themselves around the perimeter determined by coordinate points. As the work zone progresses the UAV would periodically update the perimeter to reposition robotic traffic cones. These traffic cones will operate using a Pure Pursuit system as a means to navigate.