



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Asher A. Williams, III	Project Number S0714
Project Title Emergicast Wireless Short-Range Communications for Emergency Vehicles	
Objectives/Goals My goal is to create a functioning system that will give motorists a verbal warning of any responding emergency vehicles within a designated radius. I am creating the system to be hard wired into the automobile that will receive its signal through the factory antenna and will deliver its message through the speaker system. The device will use a relay that will be able to interrupt any audio device in the car to broadcast its message, then turn off and return to the device that was originally on. If no audio device is on in the car the system will still be able to broadcast because it is totally independent. My most important goal is for this device to become standard equipment on all new vehicles.	
Abstract	
Methods/Materials Materials: Micro-controller, Relay Method: Use the micro-controller to trigger a relay and hold it open for a designated time to cut out car stereo and simultaneously activate warning message. When designated time is over have micro-controller close the relay to re-instate the radio.	
Results A system has been created that is able to interrupt any audio device running through the car's speaker system and leave a designated pause (area in which message will be inserted). Verbal warning is still being designed and built, hoping to have final product ready for fair.	
Conclusions/Discussion A basic prototype has been designed and improvements are steadily coming along. I plan to have a final market ready device within 12 months.	
Summary Statement A device that will alert motorist when an emergency vehicle is responding to a call in their area.	
Help Received Teacher helped with programming ; Father helped with creating DSP chip	