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Extrication System of Wildlife on Railway Tracks

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Abstract: *This project is used to track the location of crossing zone of Animal in the wildlife reserves or national parks. This project utilizes a RFID (Radio Frequency Identification Device), DF Player Mini, RF Module and Arduino Nano for this purpose. Train Animal Conflict (TAC) is one of the major issues across the world which affects both human and animals. A recent research indicates many animals died due to train accidents mostly at night time. Despite railway authorities instructing the drivers to reduce the train speed in forest areas, there has not been much reduction in animals death from trains. The surveillance and tracking of animals are difficult due to their size. The negative effects of animal-vehicle collisions and the increase in collisions prompted the initiation of this project. Here the RFID card is placed 1km away from the animals crossing zones and speakers are placed near the crossing zone. When the train is 1km away, the RFID reader (Which is placed inside the train) detects the card placed in forest, and RFID Reader indicates the crossing zone is coming and DF player mini plays a loud sound near the animals crossing zone using speaker. We have found out that the animals are irritated by the sound, thus they move away from the track. And as soon as the RFID Reader reads the card the Loco pilot gets display the message inside the train that the crossing zone as occurred by these information the engine driver slow the train until train crosses the zone.*

Keywords: Extrication system, RFID card and reader, Arduino nano, DF Player Mini, Railway Track

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