bengalathon
ideas that drive progress

Presentation on

QUICK ACCIDENT RESPONSE

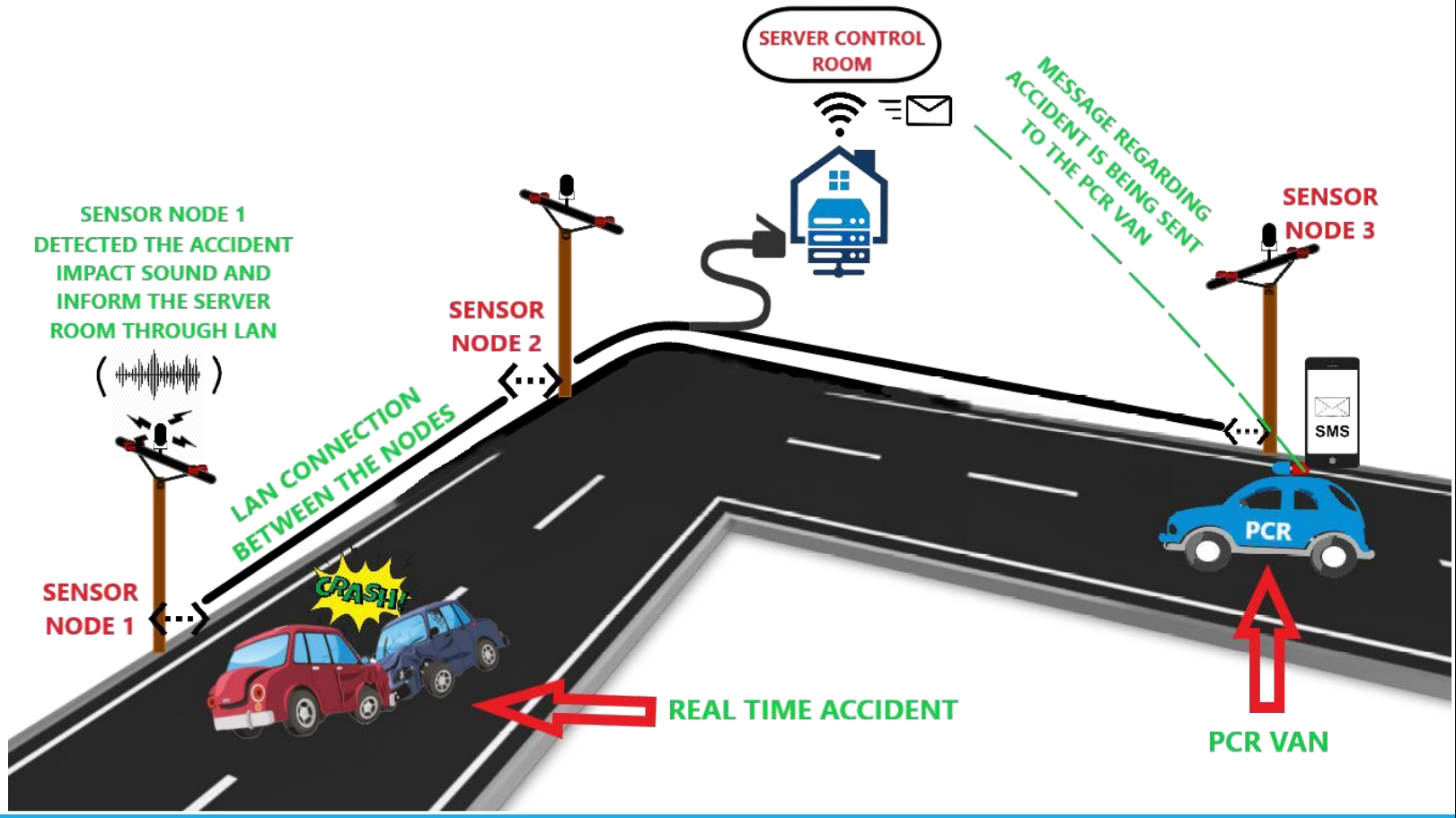
Our understanding of the challenge

- Automatic detection of the occurrence of accident.
- Inform the authority as quickly as possible.

Proposed Solution

➢ **Solution Idea :**

- Installation of the sensor nodes by the roadside.
- Connection between each server nodes and the server through Local Area Network.



Proposed Solution (continued)

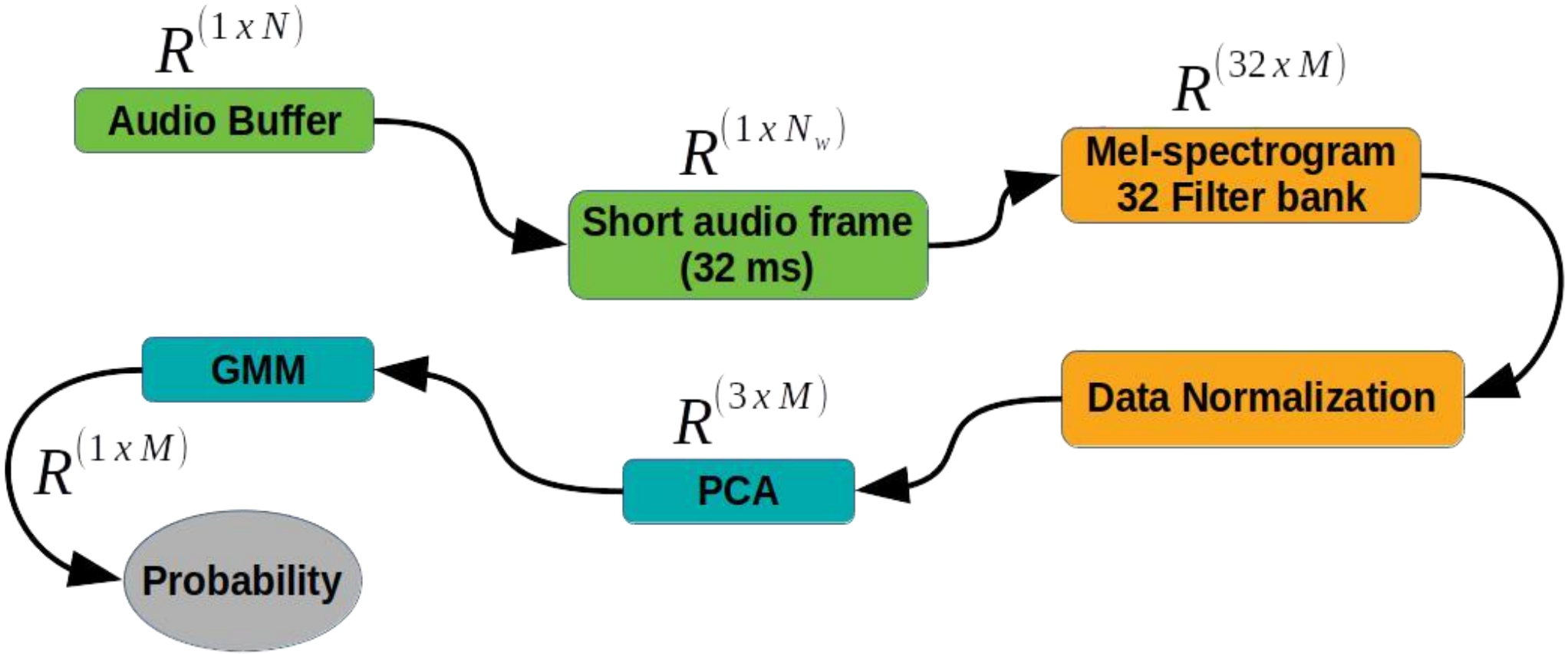
➢ Objective:

To capture Real time audio for automatic detection of target acoustic event(accident) using Machine Learning technique.

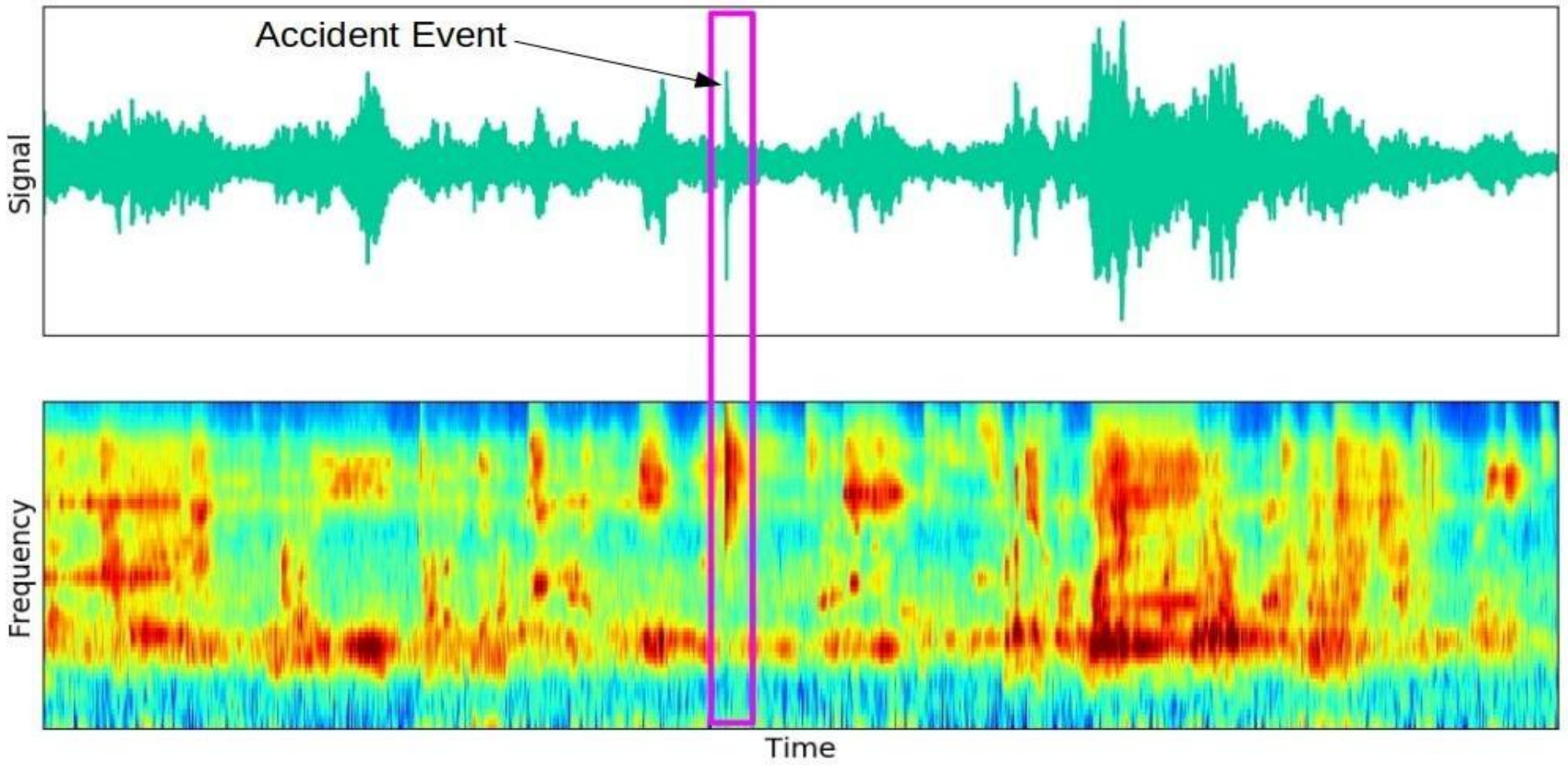
➢ Outcomes:

While the accident is detected, the sms of accident location is sent to the PCR van by the server to attend the accident site immediately.

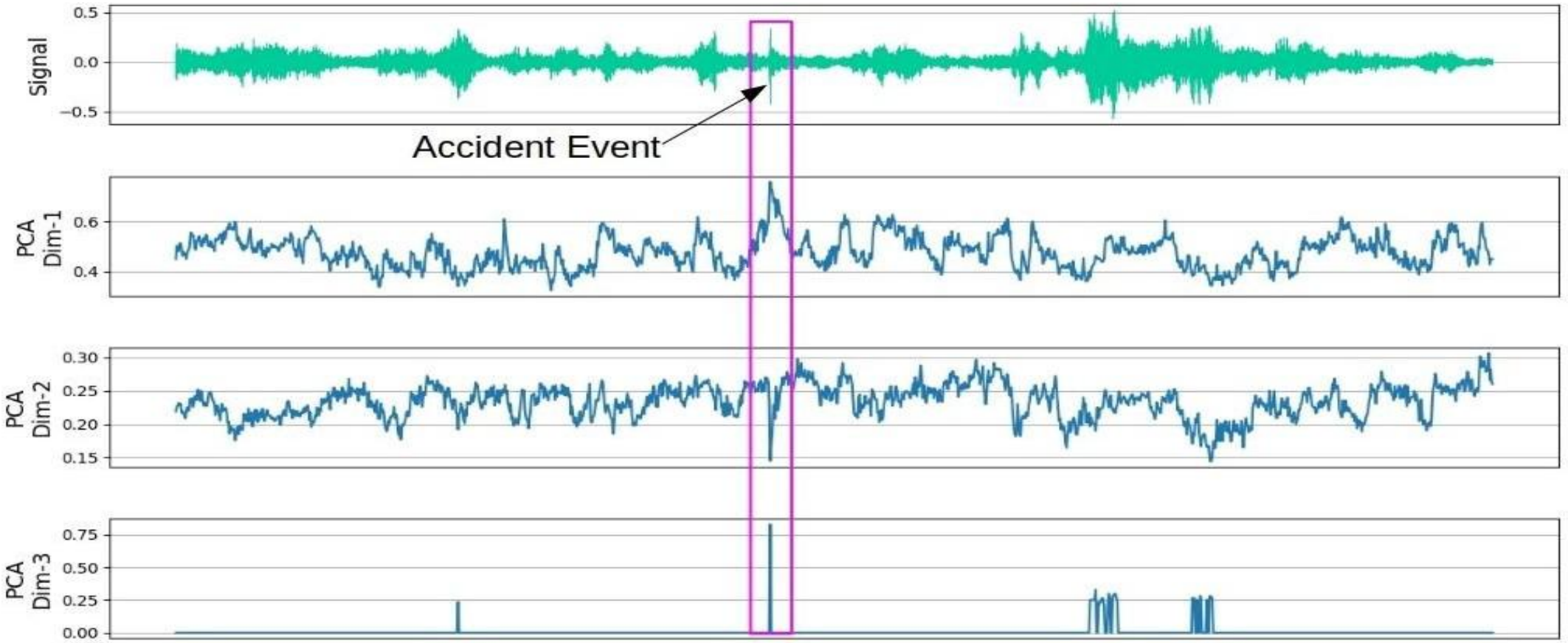
How does it work ?



How does it work ?(continued)



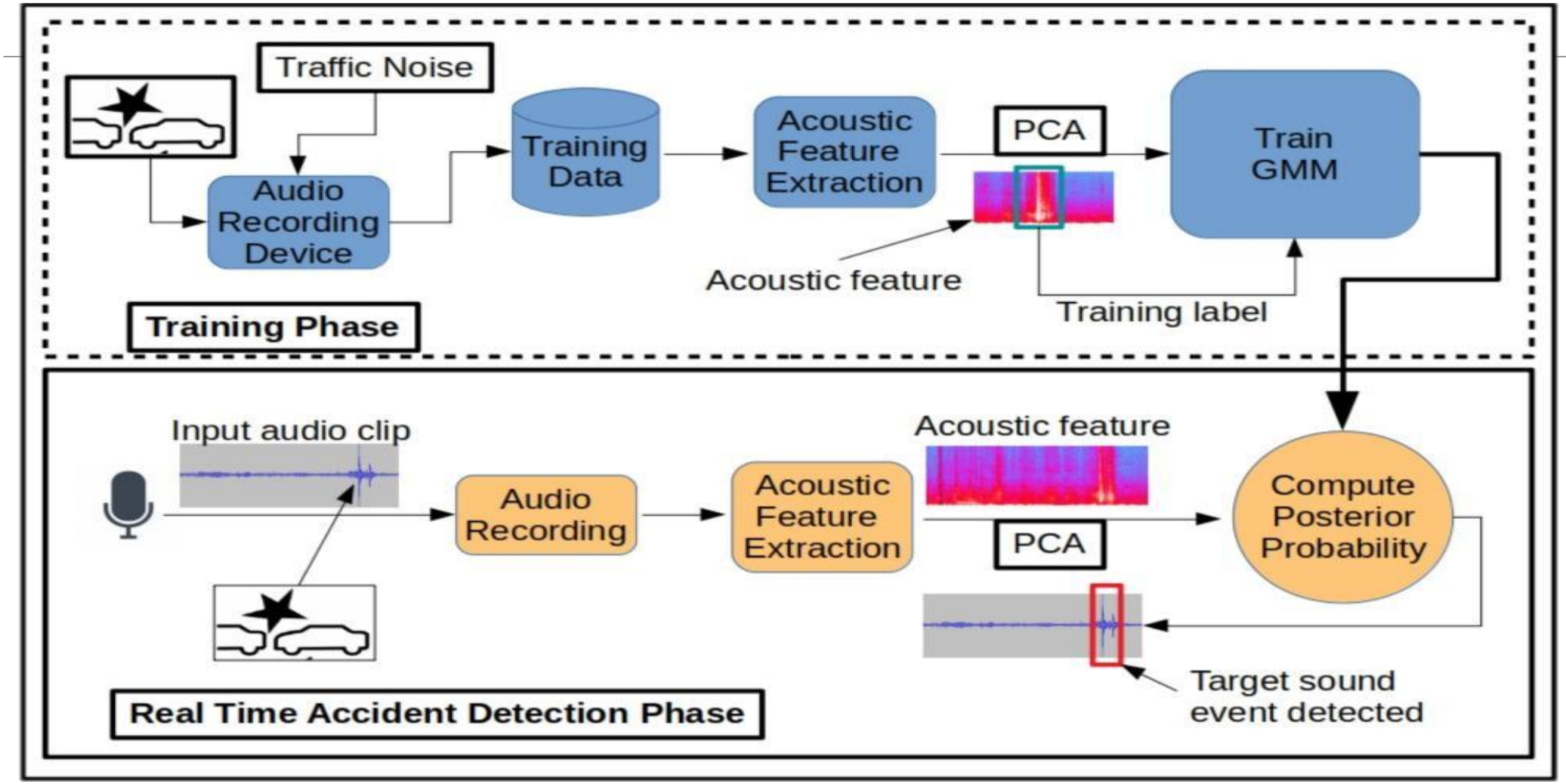
How does it work ?(continued)



What is the USP?

- Audio in loop test
- Public announcement
- Additional uses of microphone
- Benefits of placing the sensor nodes by the roadside

Solution Architecture



Risk, Issues and Mitigation plan

- Protection from **climatic adversities**.
- **Sensitivity** of microphone may be reduced over the passage of time.

- To mitigate this risk factors, we are planning to use **audio-in-loop** testing for identification of microphone sensitivity and fidelity.

Risk, Issues and Mitigation plan (continued)

- Initially, the setup may have a **premature database.** Now once it is being installed and suppose the accident occurs, that could not be detected.

- So we can manually test from the recorded database where the accident occurred and it's sound pattern. So that manual annotations can make the system **more accurate**, and like this, we can time to time **update** our system model.

Thank You