

Description:

Our client owns a School management application which is sensibly developed after analyzing the pain areas of the School, teachers, and the Parents. This application exists to serve a smoother communication between the major stakeholders related to the school (Parents, Teachers, Principal, Admin Staff & Students), thus eliminating all the issues related to them and provides transparency in the flow of information. Parents have complete access to all kinds of reports such as the attendance, annual calendar, general academic documents, exam schedule, results, mailing service, feedback system, etc., whereas it is teacher's duty to maintain these reports in a database properly.

CHALLENGES

Even after having access to these reports, there was one thing for the parents and the school admin staff to worry about, i.e., School Bus Management system. Following are some of the problems faced by the stakeholders:



Parents:

- > They had no clue on which stop the bus was and what time will it arrive their stop.
- > If the bus would arrive on time, will be late or won't arrive at all due to some problems.
- > Working parents were finding it difficult to communicate with the child to check whether he boarded the bus on time or not.
- > If the bus driver is driving the bus recklessly.



School Admin:

- > No solution to address the complaints about the reckless driving due to lack of proofs.
- > Timely pick-ups and drops.
- > Fraud in Fuel billing reimbursements.

Technology

GPS, GPRS for a two-way
Communication,
cloud storage

Language

Web : PHP, MySQL

Mobile : Android, iOS

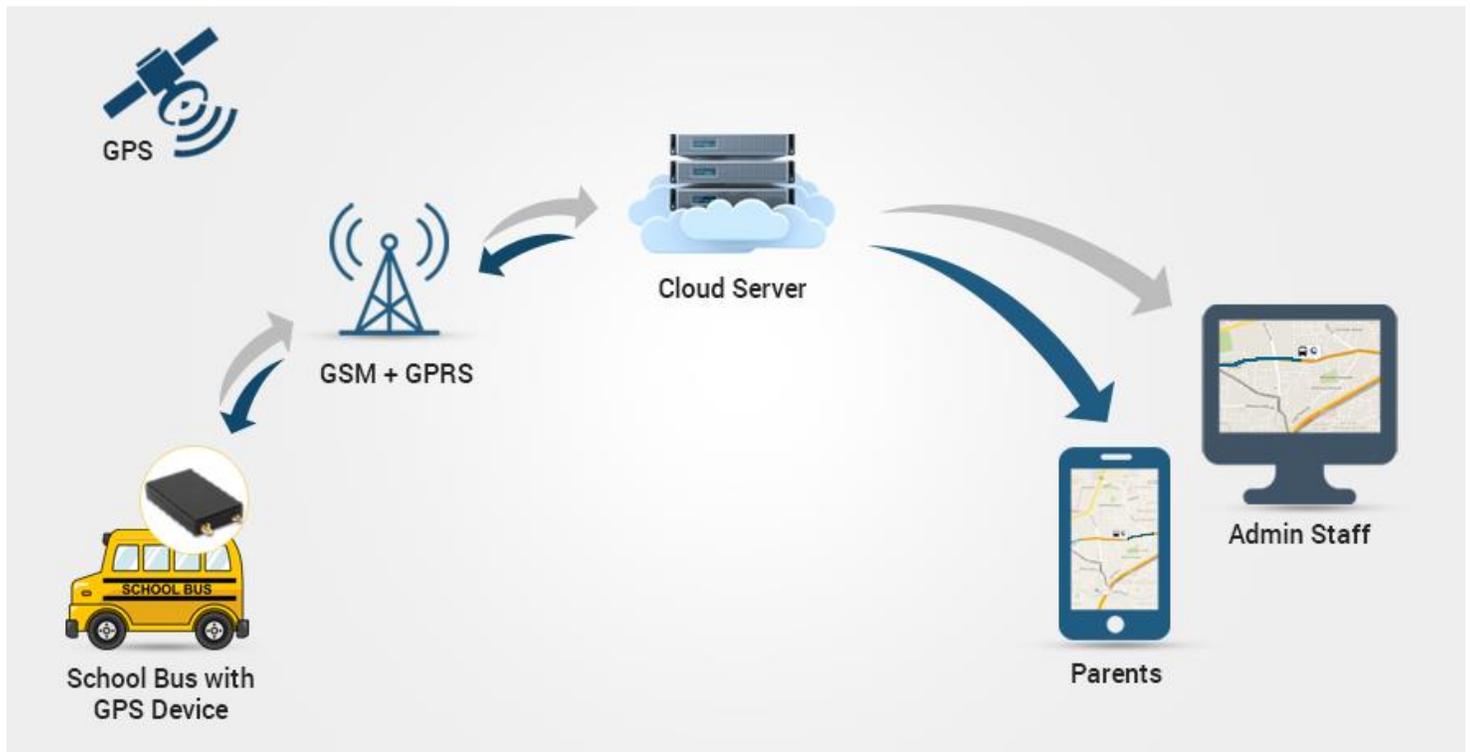
Our Solution:

Our Internet of Things team analyzed the core problem areas of the school and parents and designed a solution which is now effective and functional. Initially, we developed a personalized GPS, which uses GSM system. The GPS which has embedded sensors sends the details of the current location to our private cloud system and it helps with the enhanced tracking system.

We installed this high-end GPS in every school bus that was supposed to be tracked and it provided the signals from the bus which led to a real time monitoring. We have developed the system in such a way that the data generated by the server can be communicated to parents through the Web and Mobile apps. Working parents can easily track whether their kid is boarding the bus from home for school and at what time. Same applies to when he is arriving home from school.

Our personalized GPS also provides accurate speed information about each vehicle against the harsh driving that is to be tracked and this way, the school admin staff can be stress-free about the student's security.

We also integrated the fuel monitoring device with the system that gives the School admin staff a complete visibility of the exact fuel consumption of every bus.



Flow chart of the tracking system