

# KID'S TRACKER USING WEARABLE FOR CHILD SAFETY

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**Abstract:** In this project we are using an IOT enabled tracking system which allows to keep track on moving objects. System consists of GPS module along with Arduino UNO and GSM Module. Continuous data is getting posted on IOT platform using GSM module having GPRS connection.

## INTRODUCTION:

The system after careful analysis has been identified to be presented with the following modules:

The Modules involved are

1. Arduino UNO
2. The NEO-6M GPS module
3. SIM800 GSM module

## MODULES DESCRIPTION:

**1.Arduino UNO:**The Arduino UNO is a microcontroller board developed by Arduino.cc which is an open-source electronics platform mainly based on AVR microcontroller Atmega328.It allows the designers to control and sense the external electronic devices in the real world.

**2.The NEO-6M GPS module:**A GPS navigation device, GPS receiver is a device that is capable of receiving information from GPS satellites and then to calculate the device's geographical position.

**3.SIM800 GSM module:** GSM is a mobile communication modem, it is stands for global system for mobile communication (GSM).Internally, the module is managed by an AMR926EJ-S processor, which controls device communication, data communication through an integrated TCP/IP stack.

## Existing System:

The existing systems are not powerful enough to prevent the crime against children since these systems uses radio waves for short distance monitoring of the children. These systems give information about the children group and not about each child resulting in low assurance about their child safety to school authorities and parents.

**Disadvantages:**

- This system does not provide pinpoint location of child.
- This system use radio-waves for short distance monitoring only.

**Proposed System:**

This project proposes an IOT enabled tracking system which allows keeping track on moving objects. System consists of GPS module along with Arduino UNO and GSM Module. Continuous data is getting posted on IOT platform using GSM module having GPRS connection. We can keep track on individual's position on timely manner.

**Advantages:**

- This system provides the location of the child.
- This system helps to protect the child against kidnapping.
- Child protection against getting lost in public places.

**Architecture:**

## User Interfaces:

```
Lat : 1630.56529,N
Long : 08039.95505,E

*****
GSM CONNECTED..!
*****

HTTP INITIALIZING

AT+SAFBR=GPRS
OK
AT+SAFBR=AEN
OK
AT+SAFBR=1,1
OK
AT+SAFBR=2,1
+SAFBR: 1,1,"100.68.36.147"

OK
AT+HTTPIPINIT
OK
AT+HTTPIPARA
OK
AT+HTTPIPARA=URL
OK
AT+HTTPIPARA=JSON
OK
{"device_no":"IOT-01","client":"fitechnologies","device_type":"Generic","device_key":"BG2AVQJPNR5N7VU92Q8Y","node_no":"001","latitude":"1630.56529,N","longitude":"08039.95505,E"}
AT+HTTPIPDATA
DOWNLOAD
Connecting to Server....!!!

OK

OK

AT+HTTPIPTERM
+HTTPIACTION: 1,200,0

OK
AT+SAFBR=0,1
```

## IoT platform:

- User Management
  - Users
  - User Groups
  - Client Groups
- Device Management
  - Summary
  - Devices
- Alarm Management
  - Alarms
  - Rules
- Reports & Analytics
  - Data Reports
  - Dashboard Definition
  - Sample dashboard
  - wearable reports

### Device Configuration

### Node Details

S.No	Asset Name	Node No.	View Data
1	IOT-01	001	
2	IOT-01	002	
3	IOT-01	003	
4	IOT-01	004	

New Node

### Node Data of 001 -- IOT-01

Date

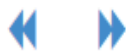
Date & Time	Refresh
2019-03-08 05:05:00	
2019-03-08 05:04:01	
2019-03-08 05:03:01	
2019-03-08 05:02:00	
2019-03-08 04:44:59	
2019-03-08 04:43:54	
2019-03-07 19:36:33	

## Data Posted On Cloud:

## Device Data

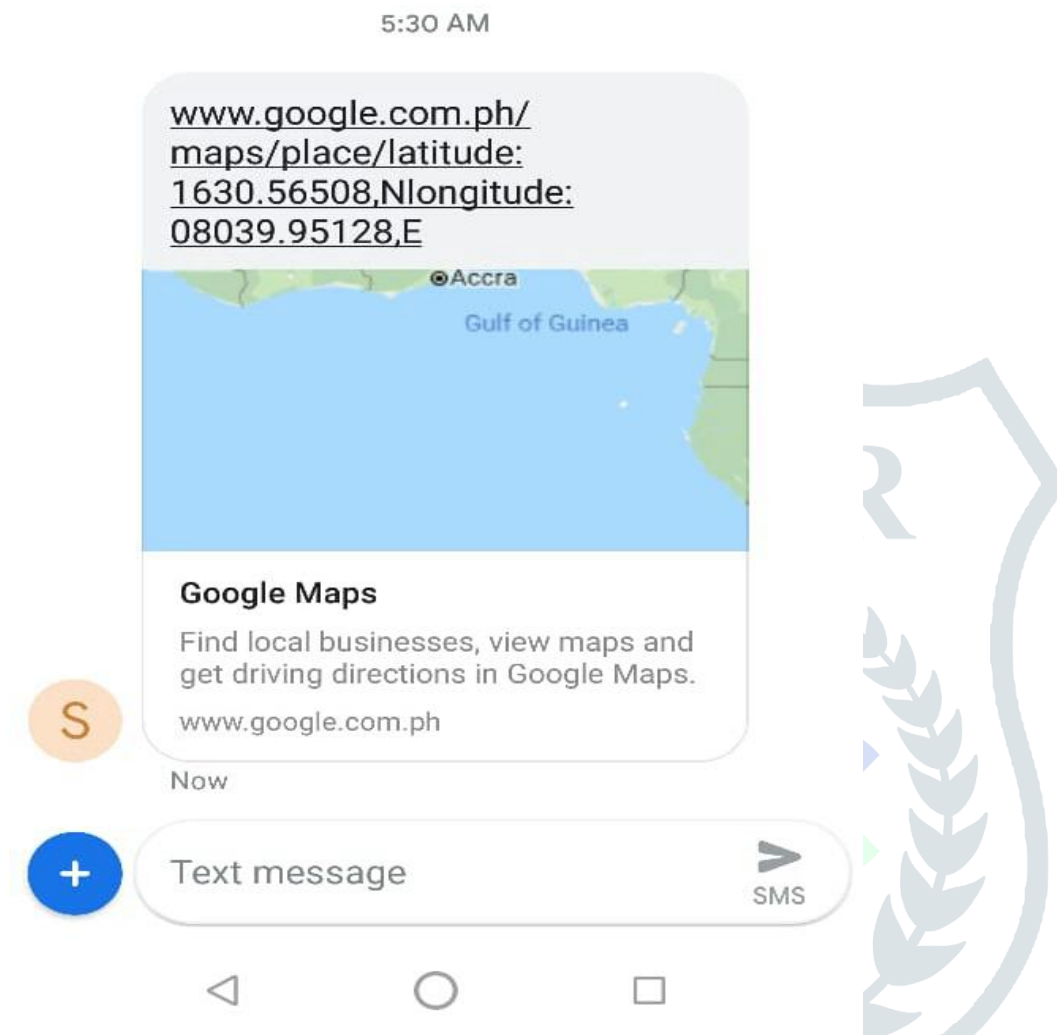


```
{
  "timestamp": "2019-03-08 05:05:00",
  "device_key": "BGZAVQJPNR5N7VU9ZQSY",
  "asset_name": "IOT-01",
  "client": "f1technologies",
  "device_no": "IOT-01",
  "device_type": "Generic",
  "longitude": 80.6659,
  "latitude": 16.5094,
  "node_no": "001"
}
```



Close

**Message alert sent to parent mobile:**



## Conclusion:

- In conclusion, this project was developed to aid locating missing or lost children.
- The project we are using an IOT enable tacking system which allows keeping track on moving objects
- System consists of GPS module along with Arduino UNO and GSM Module.
- Continuous data is getting posted on IOT platform using GSM module having GPRS connection.
- We can keep track on individual's position on timely manner.

## REFERENCES:

- IOT: [https://en.wikipedia.org/wiki/Internet\\_of\\_things](https://en.wikipedia.org/wiki/Internet_of_things)  
GPS : [https://en.wikipedia.org/wiki/GPS\\_tracking\\_unit](https://en.wikipedia.org/wiki/GPS_tracking_unit)  
GSM/Modem: <https://www.open-electronics.org/gsm-remote-control-part-4-sim900/>  
ARDUINO UNO: [https://en.wikipedia.org/wiki/Arduino\\_Uno](https://en.wikipedia.org/wiki/Arduino_Uno)