Train Tracking

A train tracking and monitoring solution allows operators to keep track of the exact location of railcars and ensure visibility at every section within the railway network.

Tracking an itinerary of any train from train station.

The Problem

1. We need a license to use Google Maps
2. A license to track the movement of trains
3. A license to track the movement of trains by satellite

Milestones

Sensors, computer devices and cables, all of that are used for connection and controlling.

We need a room in train station in which we put the control unit.

We will create a tracking system that will know the location of the train through a sensor that will allow for user to know where the train is now by an application on his Mobile phone, and tracking system allows knowing the positions of all operating trains at any time and viewing them on a map. It helps to quickly find and deploy certain trains using real-time location information. Additionally, these can be combined with status attributes such as delays and planned service work.

Deliverables

Scope

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sensors | Devices and cables | Idea/Content creation | Campaign Execution | Developers | Total (Budget) |
| **$5,000** | **$10,000** | **$15,000** | **$20,000** | **$30,000** | **$80,000** |

Project Resources

# Define

* 1. Define Requirements
  2. Assign Team

1. (Android / IOS ) App Software
   1. Design Software
   2. Coding Software
   3. Testing Software
2. System
   1. Design Hardware
   2. Build Hardware
   3. Test Hardware
3. Integrate Systems

WBS

Technical risks: Failure in connection, Failure in sensors, Application crashing.

Risk and Issue Management Plan

|  |  |  |  |
| --- | --- | --- | --- |
| Train tracking project | | | |
| Activity | Description | Preceding Activity | Activity Time (Weeks) |
| A | Define Requirements | None | 2 |
| B | Assign Team | A | 2 |
| C | Design Hardware | A | 4 |
| D | Code Software | B | 6 |
| E | Build and Test Hardware | C | 5 |
| F | Develop Patent Request | C | 3 |
| G | Test Software | D | 3 |
| H | Integrate Systems | E,F,G | 2 |

Project network

|  |  |  |
| --- | --- | --- |
| 2 | B | 4 |
| 0 | Assign Team | |
| 2 | 2 | 4 |

|  |  |  |
| --- | --- | --- |
| 4 | D | 10 |
| 0 | Code Software | |
| 4 | 6 | 10 |

|  |  |  |
| --- | --- | --- |
| 10 | G | 13 |
| 0 | Test Software | |
| 10 | 3 | 13 |

|  |  |  |
| --- | --- | --- |
| 2 | C | 6 |
| 2 | Design Hardware | |
| 4 | 4 | 8 |

|  |  |  |
| --- | --- | --- |
| 6 | F | 9 |
| 4 | Develop Patent Request | |
| 10 | 3 | 13 |

|  |  |  |
| --- | --- | --- |
| 6 | E | 11 |
| 2 | Build and Test Hardware | |
| 8 | 5 | 13 |

|  |  |  |
| --- | --- | --- |
| 13 | H | 15 |
| 0 | Integrate Systems | |
| 13 | 2 | 15 |

|  |  |  |
| --- | --- | --- |
| 0 | A | 2 |
| 0 | Define Requirements | |
| 0 | 2 | 2 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ID | RES | DUR | ES | LF | SL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| A | 2 | 2 | 0 | 2 | 0 | 2 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B | 2 | 2 | 2 | 4 | 0 |  |  | 2 | 2 |  |  |  |  |  |  |  |  |  |  |  |
| C | 3 | 4 | 2 | 8 | 2 |  |  | 3 | 3 | 3 | 3 |  |  |  |  |  |  |  |  |  |
| D | 4 | 6 | 4 | 10 | 0 |  |  |  |  | 4 | 4 | 4 | 4 | 4 | 4 |  |  |  |  |  |
| E | 2 | 5 | 6 | 13 | 2 |  |  |  |  |  |  | 2 | 2 | 2 | 2 | 2 |  |  |  |  |
| F | 1 | 3 | 6 | 13 | 4 |  |  |  |  |  |  | 1 | 1 | 1 |  |  |  |  |  |  |
| G | 2 | 3 | 10 | 13 | 0 |  |  |  |  |  |  |  |  |  |  | 2 | 2 | 2 |  |  |
| H | 1 | 2 | 13 | 15 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 1 |
| **Resources scheduled** | | | | | | 2 | 2 | 5 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 4 | 2 | 2 | 1 | 1 |
| **Resources available** | | | | | | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |

Responsibility Matrix

|  |  |  |
| --- | --- | --- |
| Team Member | Role | Responsibility |
| Naguib Sawiris | Sponsor | Fund our project |
| Kerolos Ayman | Project Manager | Define Requirements  Assign Team |
| Morcos Shehata | Application Developer | Work on IOS App |
| Mathew Hany | Electrical Engineer | Design Hardware/Build Hardware |
| Geogre Yousef | Tester | Integrate Systems |
| Beshoy Sameh | Tester | Integrate Systems |
| Marco Medhat | Application Developer | Work on Android App |

Chart, line chart

Description automatically generated

Time-Phased Budget