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.

The Problem

Tracking an itinerary of any train from train station.

Scope

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

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.

Milestones

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

WBS

1. Define
   1.1. Define Requirements
   1.2. Assign Team
2. (Android / IOS) App Software
   2.1. Design Software
   2.2. Coding Software
   2.3. Testing Software
3. System
   3.1. Design Hardware
   3.2. Build Hardware
   3.3. Test Hardware
4. Integrate Systems

Project Resources

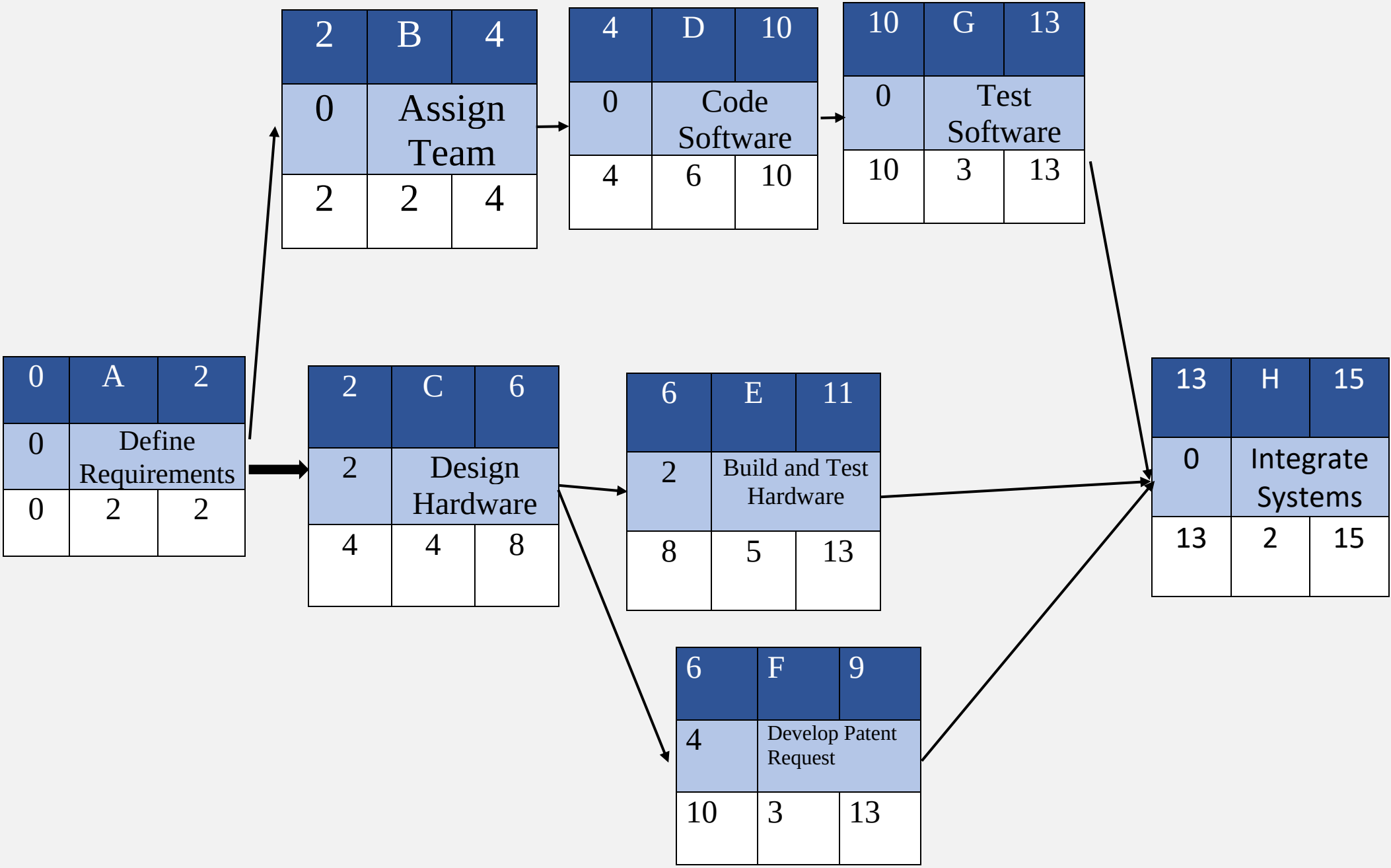
Sensors	Devices and cables	Idea/Content creation	Campaign Execution	Developers	Total (Budget)
$5,000	$10,000	$15,000	$20,000	$30,000	$80,000

Risk and Issue Management Plan

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

Project network

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

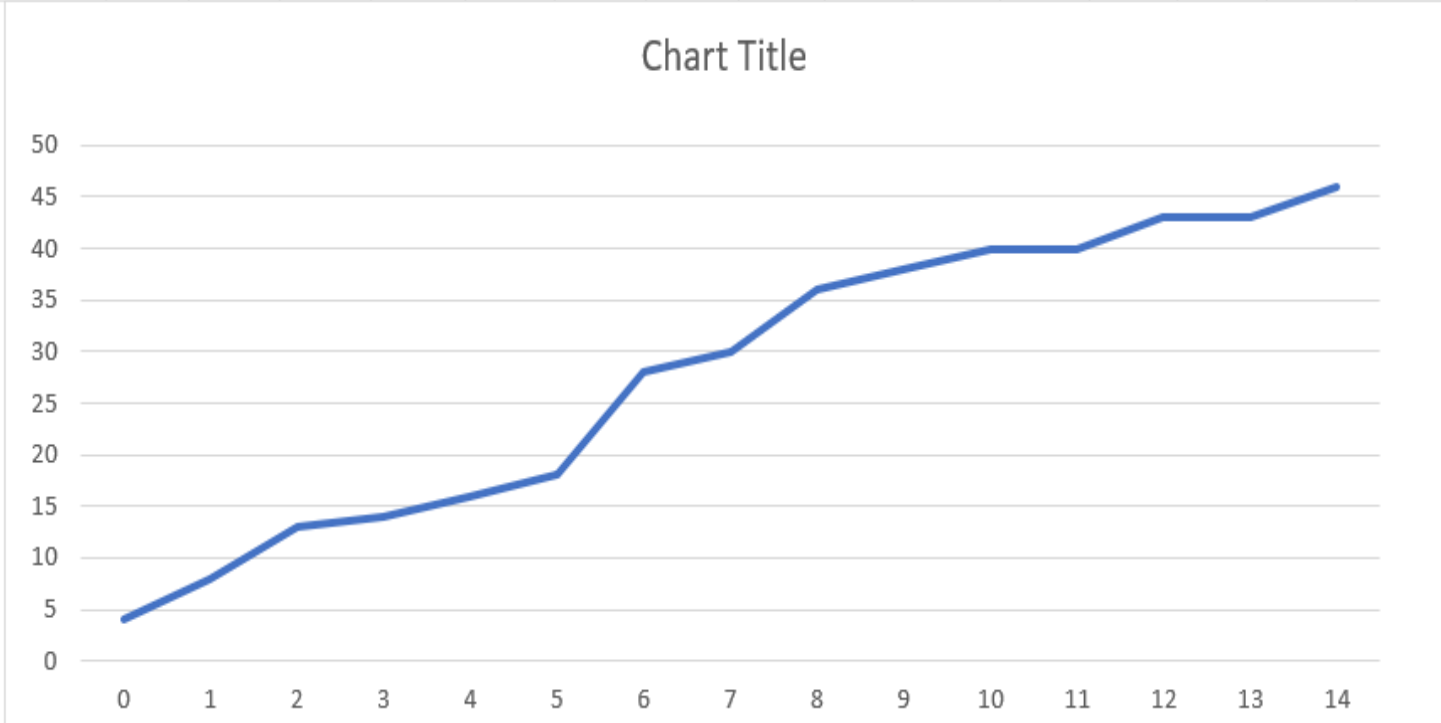

0
A
2
0
Define Requirements
0
2
2
2
B
4
0
Assign Team
2
2
4
4
D
10
0
Code Software
4
6
10
10
G
13
0
Test Software
10
3
13
2
C
6
2
Design Hardware
4
4
8
6
E
11
2
Build and Test Hardware
8
5
13
6
F
9
4
Develop Patent Request
10
3
13
13
H
15
0
Integrate Systems
13
2
15

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

Time-Phased Budget

ID	DUR	TASKS	Budget	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
A	2	Define Requirements	8	4	4													
B	2	Assign Team	5			2	1	2										
c	4	Design Hardware	6			3				3								
D	6	Code Software	10						2	2	2	2	2					
E	5	Build and Test Hardware	5							5								
F	3	Develop Patent Request	4									4						
G	3	Test Software	5											2		3		
H	2	Integrate Systems	3															3
Week total			46	4	4	5	1	2	2	10	2	6	2	2	0	3	0	3
Cumulative				4	8	13	14	16	18	28	30	36	38	40	40	43	43	46

Cumulative Baseline Budget