Track.AI User Manual





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1. Introduction

1.1 Purpose

This document aims to explain the operational procedure on how to use webbased Track.AI Monitoring System. It also explains the features of tracking and geofencing System.

1.2 Scope

The scope of this document covers:

- Explaining the features of Track.AI Application.
- Activities of users.

1.3 URL or Web site address

It will be available for each customer

2. Track.AI

Monitoring

System

GATX gives dynamic overview dashboard for monitoring and comparing all the important tracking and tracing of Railway wagon with ecstatic visualization. It also provides live visualization of Alerts and Recommendation using AI and ML models.

Once a user enters the URL address of GATX System in his/her browser, the following screen will be displayed. User has to enter the username and password provided by BLP for logging to the GATX System. Enter the username-Password-

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Click on Remember me if you want to remember your credential in the web browser Forgot password functionality will help to recover your password if you forgot your password. It is OTP based authentication system.

On successful login, user will be navigated to Dashboard Screen.

3. Dashboard Overview

In this Dashboard screen you can monitor all the Rake id listed, Rake type, Customers, location, Moving status.

The following screen will be displayed on successful login.

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The user can also monitor the dropdown functionality of customers wise, and rake wise. There is also one search functionality i.e., capable of holding all possible search related to this screen. In the Map my India you can trace live locations of Rake on the

track. It will give clear view where exactly our Rake is.

4. Rake details page

URL: It will be available for each site

You can access this page by clicking the hover on dashboard page.

In this screen we have a filter Rake wise through that we can see details of Rake. Here we can see Rake ID/Type and status of trips. We can see the KPI like Avg Speed, Avg Altitude

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Overview / Rake Details					RK20	•
Rake ID/Type RK20/BCACBM	Status Trip-Onwards	Avg Speed 35.46 km/hr	Avg Altitude 328.9 m	Distance Covered	A Total Halt 250.3 hrs	
Tracking Period 15-Sep-2022 to 29-Sep-2022	History 🚺 Live	Trip Details			Timeline View	
Last Updated	29-Sep-22, 10:32, am	From ETA : Oc CGS	: 02, 03:52 AM To MSTB		GUDURU BHASKARA RAMI REDDY LAYOUT	
Lifetime Distance : 97155 km's		Trip ID CGS - MSTB 15-09-2022	Transit Points 0		ANAGUNTA TP G	
Temperature 24.35 Deg.C	Show Trends	Trip Started At Sep 15, 2022, 11:51:48 AM	- Railway zone South Central Railway (SCR)		CHEMUDUGUNTA Varigonda	
Speed 0.00 km/hr	Show Trends	Last Location Mokameh Junction	Customer APLL	Kasumuru Cheruvu	+	
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Distance covered, Total halt and trends of Temperature, speed, Altitude, Distance and battery. There is also one more functionality called timeline view.

This is the trend of Temperature in degree c.

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This is trend of speed.

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This is trend of Battery percentage

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Timeline view of Rake

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្រា	РМ			Railway (NWR)					KM/NF			
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Trips:

Trips screen contain Rake id, Trip name, Customer, Trip status, Scheduled time, Actual start time, ETA, Transit point, Trip Type and Action.

We have a dropdown functionality of Customers, Rakes and search.

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Rake ID 🌲	Trip Name	\$ C	ustomer	\$	Trip Status	\$	Scheduled Time	÷	Actual Start Time	\$	ETA	\$	Transi	it Points 韋	Trip Ty	pe	\$ A	ctions		
RK068	GDGH - GRFV 14th Apr		TMILL		Completed		Apr 14, 2021, 3:00:00 PM		Not Available		Completed on : Apr, 16 2021 03:00 PM		0		NA			G		
RK068	GDGH - MDCC 03rd Apr		TMILL		Completed		Apr 29, 2021, 12:00:00 AM		Not Available		Completed on : May, 18 2021 11:38 AM		2		NA			G		
RK068	04th Jun trip GDGH - MDCC		TMILL		Completed		Jun 4, 2021, 5:00:00 PM		Jun 6, 2021, 5:24:25 PM		Completed on : Jun, 10 2021 09:54 AM		0		NA			Q		
RK068	DPCB - UMLS		TMILL		Completed		Apr 17, 2022, 5:00:00 AM		Apr 23, 2022, 8:42:52 AM		Completed on : Apr, 24 2022 10:42 PM		1		NA			R		
RK068	UMLS - JMTC		TMILL		Completed		Apr 19, 2022, 10:00:00 AM		Apr 24, 2022, 10:42:02 PM		Completed on : Apr, 27 2022 09:42 PM		1		NA			R		
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Under action section we can view given below screen:

This screen describe Avg speed, Avg altitude, Distence covered, total halt and Map my India.



We have functionality of add trips as well:

Here we can enter the input like Rake, Trip name, transit points, Idle time allowed, select date etc. and can create new trips.

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RK068	04th Jun tr GDGH - ME	0 Hrs 🗸 0 Min 🗸	Select Trip Date		G
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We have a pagination feature as well. We have sorting functionality of each column that will help the user to sort the item based on their convenient.

Configuration Page:

This page is configured for 4 types of users

- Super admin
- Admin
- Manager
- User

Super admin having all the access He/she can create/update/delete admin, Manager and Users.

Details of each user has been mentioned in test case documents.

Configuration page contain following items:

- RAKE ID
- CUSTOMERS
- USERS
- ROUTES
- THRESHOULD
- REPORT

To configure Rake, we have to follow below steps:

- Click on add Rake
- Select the device id from the drop down which already added by backend team
- Give the manual device id
- Select wagon design type
- Select the customer which already available in drop down

- Give the device status
- Click on "Add Rake"

After adding the Rake, you will get below screen

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Dashboard	Trips Configuration	🖹 Reports 🏾 🇯 Alerts 🖿	Directory	
Rakes Customers	Users Routes Threshold	Report All Customers	✓ All Rakes ✓ Search	+ Add Rake
Rake ID 🖨	Customer Name	Device ID	Wagon Design Type	Actions
RK62	ULTRATECH	DOTMK0001101522960-1	BCFCM	
RK00	BLP14	DOTMK0001100660395-1	BFNS	
RK068	TMILL	DOTMK000001100767519	BOXNHL	80
RK20	APLL	DOTMK0001100660338-1	🚳 всасвм	80
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In Action section we have a functionality of edit the Rake and delete the Rake. This access is only given to Super admin.

Customer configuration:

In this page we have a drop-down functionality of customer selection, Search functionality

Super admin can configure the customer and can perform following operation:

- Can give the page access according to their requirement
- Can add the customer
- Can delete the customer
- Can edit the customer

Below is the screenshot for page access functionality:

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Below is the screen for customer creation:

Customer Name*	Location*	Company Detail Address*
Customer Name	Enter a location	Company Detail Address
Company Email ID*	Company Phone Number*	
company@example.com	000000000	
Used for Login.		

User configuration page:

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3	Rishi		ULTRATECH		Manager		rishikantkum	ar58@gmail	.com		7381165273			3	
4	Awadhesh Testing		APLL		Manager		awadheshjha	a1507@gmail	.com		9988776600			3	
5	Pritiresh Testing		APLL		User		pritiresh@gn	nail.com			7206351625			3	
6	Rishikant		ACC		User		Rishikant.ku	mar@blp.co.	'n		3456786543			3	

This screen explain details of user created the super admin or admin like SI NO,User name, Customer name, Role, User Email, User mobile and action. Apart from that we have drop-down functionality of customer selection, search functionality.

Steps to create User and assigning the Role:

• Enter the functional Email id in give below screen:

Add	User	×
	User Email*	
	user@example.com	
	Used for Login Send OTP	

Click on send OTP

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Add User		×
User Email*	User Name*	
prasanth.t@blp.co.in	User Name	
O Used for Login		
User Mobile*	Role*	
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Customer*	Rakes	
Select Customer 🗸 🗸	Select Rakes	•

Enter the following details:

- Enter User Name
- Enter the user mobile
- Select the role you want to give the user
- Select the customer for which you want to create the user
- Select the Rake you want to assign the user
- Click on add user

You can see the user details in user listing page.

Routes configurations:

In this configuration we have a functionality of "add Route" and "Add Geofence". Apart from that we have pagination functionality. Route is generally created for auto trip as per customer requirement.

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Bashboard	🖶 Tri	ps	🗘 Confi	guration	🖹 Repor	ts	🈩 Alerts	Direc	tory					
kes Customer	rs U	sers	Routes	Threshold	Repo	rt	All Customers	~	Search		🕇 Add Ge	ofence	+ Add	Ro
Routes	Geofenc	e												
Customer Name	\$	Rake ID	\$	Route Name	\$	Source		\$	Destination	\$ Transit Points	\$	Actions		
APLL		RK20		MLPM - GFPA		MLPM			GFPA	0			3	
APLL		RK20		MLPM - CGS		MLPM			CGS	0			3	
APLL		RK20		GFPA - MSTB		GFPA			MSTB	0			3	
APLL		RK20		CGS - MSTB		CGS			MSTB	0			3	
TMILL	> ro	RK039 ws per pag	ge: 15 🗸	route6820		delhi			Banglore	1		8	2	
vright @ 2021 Devel	oped by l	ndustry Al	All rights r	eserved							r	Doworod R		hietz

Steps to create Routes:

Click on add Routes Button you will get below screen:

) T	Add Route				×
l	Select Customer*		Select Rake*	Transit Points Custom Scoogle	G
fen	Route Name*		Select Source* Custom Google Enter the Location Name		
•	Select Destination* Custom	Google			
r				Close Create Rout	e

- Select the customer you want to create the Route
- Select the Rake assigned to that customer
- Enter route name
- Enter the source location name
- Enter the destination location name
- Enter the transit points
- Click on create Route

You can see newly created Route in Route screen

Geofence configuration: Geofence is generally used to create for get the alert while going out from the created geofence. Already created geofence is used for manual trip

creation as a source and destination and customer agree on that. List of created geofence can be seen the source and destination of manual trip creation.

Please follow below steps to create Geofence:

Click on "Add Geofence" you will get below screen

T Add	Geofence		×
L Geof	ence Name*	Geofence Name	Search Location
4			Close Add Geofence

- Enter the Geofence name
- Search the location
- Click on locations (Map my India) you want to create the Geofence
- Click on "Add Geofence"
- You can see the created Geofence in Geofence listing page
- If You want to reset the selected location you can click on reset button

Threshold Configurations:

The below mentioned screen indicates Threshold of different parameter like Battery, Device temperature, Distance, Speed, Vibration, Halt Status, Rake movement Status, Geofence status. You can set warning threshold as well as Critical Threshold.

Through Action button you can manually configure the threshold (Can set the Threshold and can activate the alert).

Through Email configure button you can configure the mail to respecting mail id.

Screenshot:

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	Dashboard	🖶 Trips	Configuration	Reports	🈩 Alerts	Director	ſŶ				
Rak	customers	Users	Routes Threshold	Report			BLP14	✓ RK00	~	Email Co	nfig
P	arameter		Warning Threshold		Critical Threshold		Unit	Alert State	Actions		
в	ATTERY		5		10		%	Not Active			
D	EVICE TEMPERATURE		0		0		Deg C	Not Active			
D	ISTANCE		0		0		KM	Not Active	C		
s	PEED		0		0		km/hr	Not Active			
v	IBRATION		0		0		g	Not Active	C		
н	IALT STATUS		0		0		min	Not Active	C		
R	AKE MOVEMENT STATUS		NA		NA		NA	Not Active	ß		
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Report Configuration:

GATX	×	+					~	- 0 ×
$\leftarrow \ \rightarrow \ G$	adtx-tracking.fireb	aseapp.com/home/config/Report					9 B 1	7 🗯 🖬 🚯 🗄
Ġ Gmail 🔇	YouTube 🚷 My Activitie	s 💡 Maps 🔇 GatxNewProject 阻 Product Deve	elopme 🧭 Timesheet •	Clockify 👥 Home [GATX_NEW Trello	😥 Leave and Atten	da [Bugzilla N	fain Page »
Track.Al								4 ³¹⁸ 8
Dashb	oard 🖶 Trips	Configuration	🆄 Alerts	Directory				
Rakes	Customers Use	rs Routes Threshold Report	All Custom	ers 🗸 Se	arch	R	eport Config	Report Generate
			_					
SI	Dakas	Paparte		Email		Customer	Frequency 🚔	Actions
No	Rakes	Reports		Email		\$	rioquonoy 🛊	Actions
1	RK20	Mileage		simmon.sinha@gatx.co pritiresh@gmail.com;	om;	APLL	Daily	
2	RK20	Mileage,Total Trips,Average Speed,Running & Halt Percentage,Temperature	Time,Battery	simmon.sinha@gatx.co	om;	APLL	Daily	
3	RK20	Mileage,Total Trips,Average Speed,Running & Halt	Time	akshay.rk@blp.co.in;		APLL	Monthly	
4	RK20	Mileage,Total Trips,Average Speed,Running & Halt * Percentage	Time,Battery	simmon.sinha@gatx.co	om;	APLL	Daily	00
5	RKheat001,Test395	Mileage, Average Speed		venkatesh.g@blp.co.in	1;	ACC	Daily	
<	1 2 3 🕻	rows per page: 15 🗸						
Copyright © 2	2021 Developed by Ind	ustry.Al All rights reserved.					Powered	By BLP industry.∧I
E 🔎 Sea	arch	Si o 🛱 🧮 🔇) 🕫 🧔 🤅) 📝 🐖 🧧	<u> </u>		へ 4%	⊇ 🧖 10:59 AM 10/7/2022 😽

In this screen we can see the Rake, Reports type, Email assigned, Customer, frequency of reports, and Action button. We have a pagination functionality as well.

We have majorly two functionalities:

- Report Config
- Report Generate

Steps to Report Config:

Click on Report Config button you will get below screen:

			ind	lustry. <mark>//</mark>		Track.AI Us	er M	lanua
Repor	rt Con	figuration				Select Customer	~	×
	•	Mileage	٥	Total Trips	٥	Average Speed		
	٥	Running & Halt Time	•	Battery Percentage	•	Temperature		

- Select the customer from drop down you want to configure the report:
- Check the button you want to get the reports for that particular customer
- Click on submit
- Your report configuration done

Generate Report:

To generate the Report, click on "Generate Report" you will get below screen:

elect Customer*	Select Rake*	e.						
Select Customer 🗸 🗸	Select R	akes	•	•	Mileage	۰.	Total Trips	
-Mail*		Select Frequency*		•	Average Speed	۰.	Running & Halt Time	
Select Email	-		~	•	Battery Percentage	•	Temperature	C

- Select the customer from drop down
- Select the Rake
- Select the Email Id
- Select the frequency you want the report
- Check the Reports you want to generate
- And click on submit

User will receive the mail according to the configured item:

Reports:

In this screen we have drop-down for customer selection, search functionality Pagination functionality:

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← → C	racking.firebasear	op.com/home/reports	Product Developme	🤇 Timesheet • Clo	ckify 👥 Home	GATX_NEW	Trello 😰 Leave and Attenda	👂 🖻 ★ 🖨 🔲 🔞
Track.Al								¢ <mark>318</mark> 8
Dashboard	🗑 Trips	Configuration	Reports	🈩 Alerts	Directory			
Reports					ACC	~	Search	+ Generate Report
Date	\$	Customer Name	\$	Frequency		Docume	ents 🌲	Actions
06-10-2022		ACC		Custom		mileage		<u>+</u>
06-10-2022		ACC		Custom		mileage		<u>+</u>
06-10-2022		ACC		Custom		speed		<u>+</u>
04-10-2022		ACC		Custom		mileage		<u>•</u>
04-10-2022		ACC		Custom		mileage		<u>•</u>
04-10-2022		ACC		Custom		mileage		<u>•</u>
04-10-2022		ACC		Custom		temper	ature	<u>.</u>
< 1 2 3	4 >	rows per page: 15 🗸						
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Steps to generate the Reports:

• Click on "Generate Report" you will get below screen:

	• • • •	· -				
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Dashboard	Report Download				×	
	Select Date*	Customer*	Select Rake*	Report Type*		
Reports	06-Oct-2022 to 07-Oct-2022	BLP14 V	Select Rake 🗸	Select Report Type	~	- Genei
Date				Close	e Report	
06-10-2022	ACC		Custom	mileage	÷	

- Select the date Range
- Select the customer
- Select the Rake
- Select the Report Type
- Click on Generate Report

You will get one pop up message that "Your report is getting generated" and reports you can see in report listing page.

Alert Screen:

In this screen we have multiple functionalities Like date selection, Customer selection dropdown, Rake selection drop-down and search functionality.

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Dashboard	🖶 Trips	🌣 Conf	iguration	Reports	🈩 Alerts		Directory						
ts				30-Sep-202	2 to 07-Oct-2022	All C	ustomers	✓ All Rakes	~	Search			
Rake Id 🌲	Customer Name	Criticality \$	Timestamp 🌲	Description		¢	Location 🜲	Acknowledged	\$	Comment	¢	Importar	ıt
RK20	APLL	WARNING	Oct 7, 2022, 11:07:12 AM	RK20 genera Threshold va km/hr, Last r km/hr	ated an Warning alert. alue set for speed is 50 registered value is 71.0) 0	Kathola	No	*	No Comments	Ø	*	
RK62	ULTRATECH	CRITICAL	Oct 7, 2022, 10:44:37 AM	RK62 genera Threshold va 15 Deg C, La Deg C	ated an Critical alert. alue set for temperatur ast registered value is :	re is 27.40	Dodballapur	No	~	No Comments	۲	*	
RK20	APLL	WARNING	Oct 7, 2022, 10:41:39 AM	RK20 genera Threshold va km/hr, Last r km/hr	ated an Warning alert. alue set for speed is 50 registered value is 69.0))0	Colonelganj	No	*	No Comments	Ø	*	
< 1	2 3 4 5	6 7 8	60 >	rows per page	: 15 🗸								
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This page also explains Rake id, Customer details, criticality of alert, Description of alert, location where alert generated, Acknowledged functionality.

We can put the comment under comment section. We can mark importance of alert by clicking on "*". We can navigate the page by using pagination functionality.

Directory:

In this page we have a functionality of "zone selection drop-down "Division selection

Under listing page, we have Zone, Division, Person Name, Role, Email, Mobile and Actions:

We have "Add Contact" functionality as well.

nail 🔇 YouTube 🧯	My Activities ♀	Maps (GatxNewProject	Product De	velopme 🤇 Timesheet •	Clockify	😥 Home 🛄 GATX_1	NEW Trello 😰 Leave an	id Attenda [Bu	gzilla Main Page
k.Al										Д ³¹⁸
Dashboard	🖶 Trips	¢ C	onfiguration	Repor	ts 🇌 Alerts		Directory			
ctory					All Zone	~ A	Il Division	✓ Search		+ Add Con
Zone	Division	¢	Person Name	Role 🜲	Email	ŧ	Mobile No 🜲	Alternate Mobile No 🗢	Landline No 🖨	Actions
Dedicated Freight Corridor (DFC)	Western DF (WDFC)	С	Kavi	CRSE	NA		6782930294	NA	NA	
East Coast (ECoR)	Khurda Roa (KUR)	d	Mr. Shaw	ADRM	adrmeco@gmail.co		9910919222	NA	NA	
	Khurda Roa	d	Mr. Shaw	ADRM	adrmeco@gmail.co		9910919222	NA	NA	
East Coast (ECoR)	(KUR)									
East Coast (ECoR) East Coast (ECoR)	(KUR) Khurda Roa (KUR)	d	Mr. Shaw	ADRM	adrmeco@gmail.co		9910919222	NA	NA	

Steps to add contact:

• Click on Add Contact button you will get below screen:

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Zone*	Div	ision*		Role*	
	~		~	Select the Role 🗸	
Person Name	Mo	bile No*		Alternative Mobile No	
Enter Person Name	E	nter Mobile No		Enter Alternative Mobile No	
Jser Email				Landline No	
Enter Email ID				Enter Landline No	

- Select the zone
- Select the division
- Select the predefined Role You want to give
- Enter Person Name
- Enter the Mobile Number
- Enter the User Email
- Enter the Alternate Mobile number
- Click on add contact button

Your contacts will be visible on Directory page.

KPI:

KPI used in Rake Details page:

Rake ID/Type RK068/BOXNHL	Status Non Trip	Distance Covered	۵	Total Duration 168.00 hrs	Avg Speed 5.05 km/hr	129.62 hrs
Tracking Period 05-Oct-2022 to 12-Oct-2022	History 🚺 Live	Trip Details				Timeline View
Last Updated	12-Oct-22, 09:50, am	Last Location Sini Junction		Customer TMILL	Map Satellite	मुनीनूत Burdwan r न वर्षमान L J
Lifetime Distance : 109074 km's Temperature 31.45 Deg.C	Show Trends	Temperature 25.89 ℃		Humidity 68 %	Rourkela	hedpur WEST BENGAL বিষয় Kolkata কেলকাতা মন্ডপুর
		Preceire		Wind Sneed	3 4.78-1	H45
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- Distance covered: By default, we are showing last 7 days data that is captured through that particular Rake id in live view. As per customer requirement we can saw maximum 60 days data in the form of Historical view
- Total Duration: This KPI indicate that how time Rake/wagon has to reach the destination. For live view we are showing last 7 days data

• Average Speed: Through this KPI we are showing Average speed of Wagon by using total distance covered the Rake/Wagon and Average time taken(hr)to reach the destination.

Formula

Average Speed= (Total distance covered(km))/ (Total Avg Time in hr.)

In live view we are verifying last 7-day data for this particular page and Historical maximum we can show last 60 days.

• Total Halt: This is the halt hour during moving wagon. Halt hour we can get by using the timeline view document.

Formula

Halt Hour = (Standing timestamp) – (Moving timestamp).

Timestamp	Rake ID	Location	Railway Zone	Distance	Temperature	Battery	Altitude	Speed	Vibration	Status
10/12/22, 9:50 AM	RK068	Sini Junction	South Eastern Railway (SER)	848 km's	31.45 Deg C	55.9 %	174 M	50 km/hr	NA	moving
10/12/22, 8:51 AM	RK068	Sini Junction	South Eastern Railway (SER)	847 km's	26.75 Deg C	55.7 %	215 M	0 km/hr	NA	standing

- Lifetime Distance: The total distance travelled by the Rake since it is installed.
- Temperature: There is two types of temperature one is weather and one is Rake device. Weather temperature directly used to come from weather API implemented in our application and device temp used to come from device sensor
- Humidity: This value is also coming from weather API.
- Pressure: This value is also coming from weather API.
- Wind Speed: This value is also coming from weather API.

Below shown KPI belongs to device installed in Wagon:

All the KPI values shown is the Screen is directly coming from Sensor

		Track.AI User Manual			
Li	ifetime Dis	stance : 22052 kn	n's		
	₽ ∎	Temperature 32.45 Deg.C		Show Trends	
	0	Speed 71.00 km/hr		Show Trends	
	i€	Altitude 327.00 m		Show Trends	
	۵	Distance 257.00 km		Show Trends	
	-+	Battery 87.40 %		Show Trends	

• ETA: Based on Total distance from source and destination and Average speed of the Rake/Wagon we used to calculate the ETA.As per current customer requirement for Moving Rake this calculation will happen based on historical value and for manual trip creation it is editable. Below screenshot is for better understanding:

	Add Trip		×
1 KN -	Select Rake*	Trip Name* Transit Points Custom Google test Enter the Location Name	
3rd Ma SLJ – I Sth Ma	From* Custom Scoogle	To* Custom Scoogle	
TRN - th Ma SLJ - f	Idle time Allowed*	Select Date* Select Trip Date	
SLJ 4th Ma	Round Trip ETA: 4.83 Hrs @ 24 Km Per Hour		
UTC - Oth Ma	Distance to be covered 115.84 km's,	Close Create Tri	ip

Reports Page KPI

• **Mileage:** We are showing here Average milage day wise, week wise and month wise

Total Avg Distance: Average distance covered during selected Time range, it can be for one, one week, months according to customer requirement

Formula

Average Mileage per day(km/hr): = (Total Distance covered for the selected time range)/ (Total days in between that time range)

Average Mileage per Week(km/hr): = ((Total Distance covered for the selected time range)/(Total week during that time range)

Average Mileage per month(km/hr): = ((Total Distance covered for the selected time range)/(Total month during that time range)

Cumulative Mileage: This is total mileage based on selected time range and based on historical data.

• **Speed:** We are showing here Average Speed Day wise, week wise and month wise

Formula

Average Speed per day(km/hr.): = (Total Distance covered for the selected time range)/ (Total days in between that time range)

Max speed/day: This is the maximum speed achieved by the wagon on that particular day

Min Speed/day: This is the Minimum speed achieved by the wagon on that particular day. It could be zero as well if the wagon is not moving

Functional DOT Devices:

indu	ustry. <mark>//</mark>	Track.AI User Manual
Add Rake	Chiefomore N All Dakoe	×
Device ID* Select Device DOTMK000001100660338 DOTMK000001100660395 DOTMK000001100767519 DOTMK000001100769227 DOTMK00001100660338-1 DOTMK0001100660338-1 DOTMK000110052960-1 DOTMK000011007529501	Wagon Design Type* Select Wagon Desigr ↓ Customer* Select Customer ↓	
	Close	Add Rake

Available Wagon Design type:

Add Rake	×
Device ID* Select Device ✓ Rake ID* ✓ RK000 ✓ Device Status ✓ Deactivate ✓	Wagon Design Type* Select Wagon Design ✓ Select Wagon Design Type BFNSM BOXNHL BCACBM BLCM BCFCM BFNS
	Close Add Rake

Architecture Diagram:

Below is Architecture Diagram of the GATX Application





Technologies used in GATX Application:

Back-End: Node JS Front-End: Angular

DATABASE: Fire store

Database Mapping:

URL: URL of cloud database

Collection Name	UI Menu	URL Mapping
Alert	Alerts page	URL of respective page
Customer_Role_Settings	Add user	URL of respective page
Customers	Customers	URL of respective page
Geo_Fence_List	Geofence	URL of respective page
HistoricalTrip_Details	Trips	URL of respective page

HistoryData		Sensor data for custom date range
LiveData		Sensor data for 15 min frequency
Railway_Official_Contacts	Directory	URL of respective page
Railway_Zone	Zone drop- down	URL of respective page
Rakes	Config/rake	URL of respective page
ReportConfig	Config/Report	URL of respective page
ReportGenerate	Report	URL of respective page
Reports_Info		User who is generating the report
Route_List		URL of respective page
Sensel_HistoryData		NA
Sensel_LiveData		NA
Threshold		URL of respective page
Trips		URL of respective page
Users		URL of respective page
Wagon_Design_Type		URL of respective page

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