

# RantCell Pro v10.8 Features



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### Introduction:

The purpose of this document is to provide brief information about new features that will be available on RantCell Android version of Pro enterprise app: v7.2.29 software version.

RantCell iOS version of Pro enterprise app: v1.0 software version.

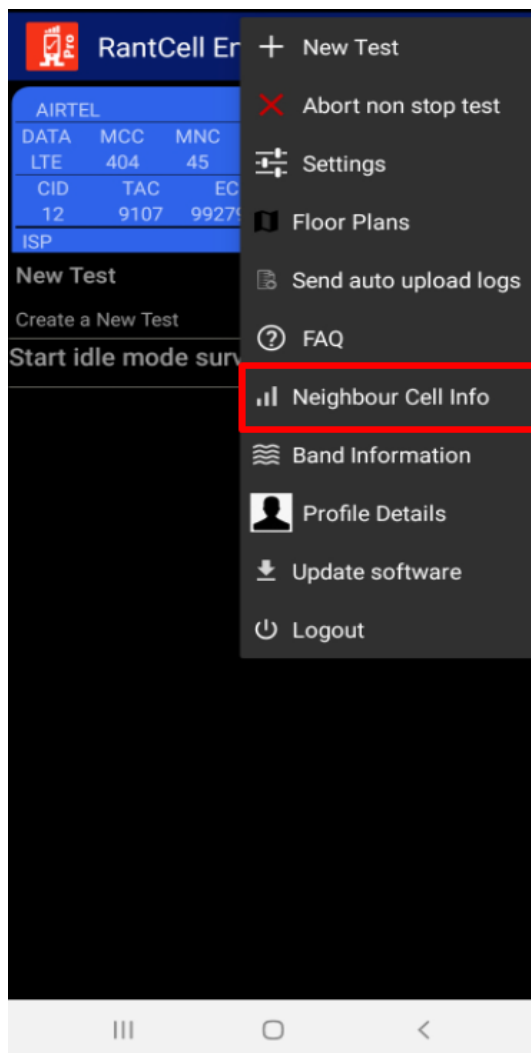
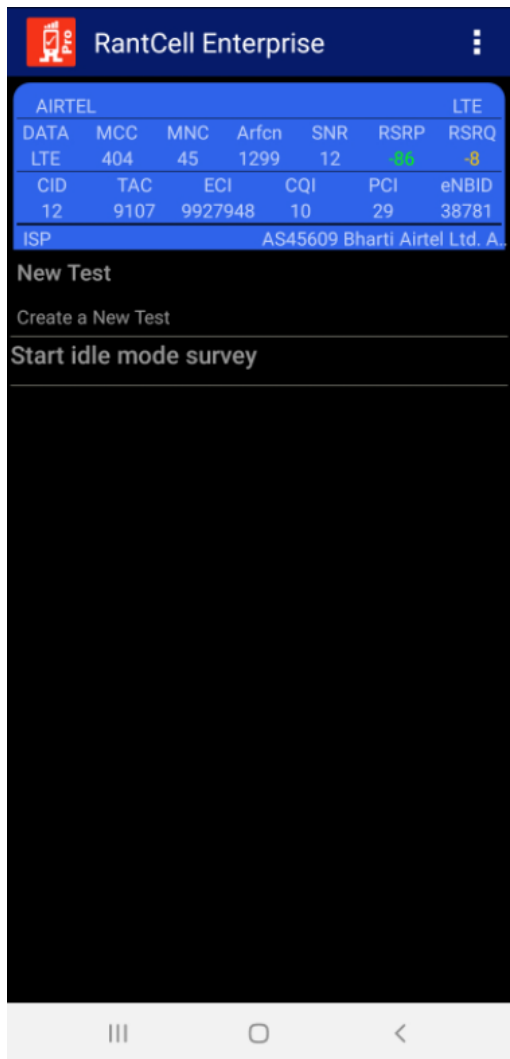
RantCell dashboard version: v10.8

### RantCell v10.8 new features



## Feature ID 1046: Neighbor cell measurement on 5G NR, 4G, 3G, 2G networks.

RantCell Pro can now measure neighbor cell information on 5G NR, 4G, 3G, 2G networks (dependent on Android device) when running active test such as FTP, ping, speed etc. or idle mode measurement. Users can view the Neighbor cell information along with the serving cell information on RantCell dashboard. Please note that feature requires “Capture neighbor cell data” flag enabled under settings as shown below.



**Neighbour Cell Info**

Serving Cell : LTE AIRTEL N : 4  
 Mcc : 404 Mnc: 45 Tac : 9107  
 PCI : 29 ECI : 9927948 Band : NS  
 Arfcn : 1299 eNB : 38781 Lcid : 12  
 Rsrp : -77 Rsrq : -12 Sinr : 6  
 TimingAdvance : 16 Cqi : 10

Neighbour Cell 1 : LTE  
 Mcc : NS Mnc: NS Tac : 0  
 PCI : 198 ECI : 0 Band : NS  
 Arfcn : 1299 eNB : 0 Lcid : 0  
 Rsrp : -84 Rsrq : -16 Sinr : NS  
 TimingAdvance : 0 Cqi : NS

Neighbour Cell 2 : LTE  
 Mcc : NS Mnc: NS Tac : 0  
 PCI : 493 ECI : 0 Band : NS  
 Arfcn : 1299 eNB : 0 Lcid : 0  
 Rsrp : -84 Rsrq : -18 Sinr : NS  
 TimingAdvance : 0 Cqi : NS

Neighbour Cell 3 : LTE  
 Mcc : NS Mnc: NS Tac : 0  
 PCI : 493 ECI : 0 Band : NS  
 Arfcn : 39125 eNB : 0 Lcid : 0  
 Rsrp : -96 Rsrq : -15 Sinr : NS  
 TimingAdvance : 0 Cqi : NS

Neighbour Cell 4 : LTE  
 Mcc : NS Mnc: NS Tac : 0  
 PCI : 198 ECI : 0 Band : NS  
 Arfcn : 39125 eNB : 0 Lcid : 0  
 Rsrp : -98 Rsrq : -17 Sinr : NS  
 TimingAdvance : 0 Cqi : NS

**Settings**

**General Settings**

**Enable/Disable GPS logging**  
 Enable GPS to ensure location information is captured while app performing testing.

**Capture Neighbour cell data**   
 will allow app to capture the neighbour cell information along with the Serving cell information.

**Enable share data**   
 Enable or Disable network test log information to RantCell cloud.

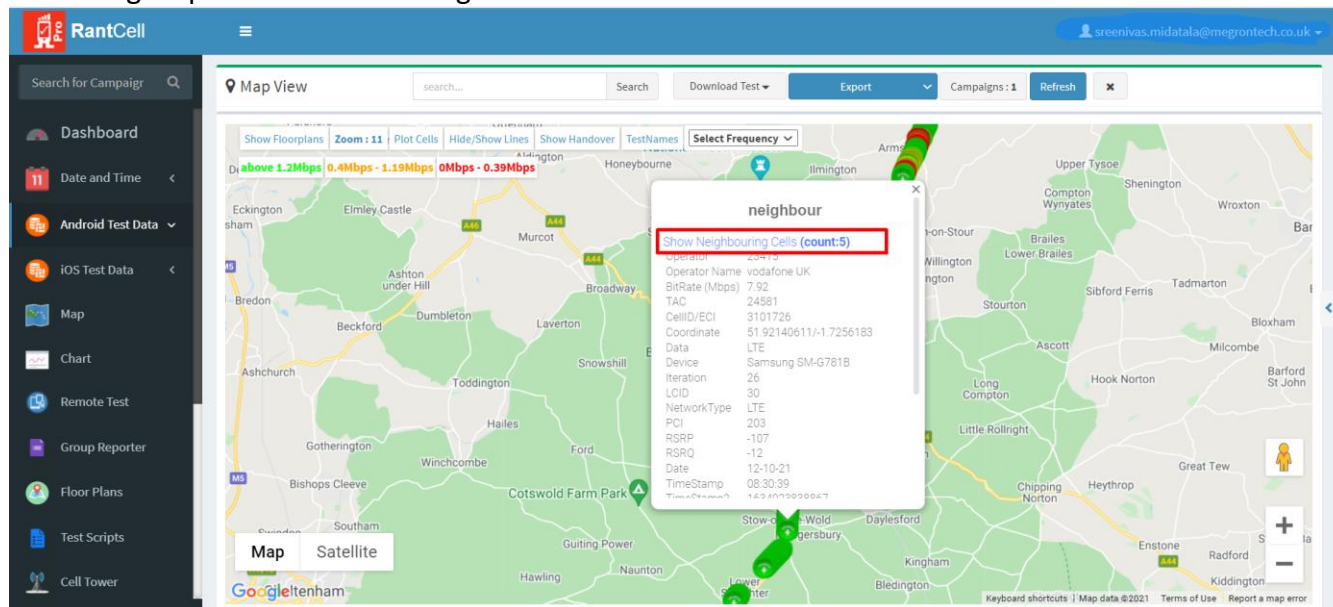
**Allow remote test**   
 Please note that this will allow app to accept and run test config sent from RantCell dashboard

**Allow Auto Upload**   
 Please note that this will automatically upload failed campaigns to RantCell cloud.

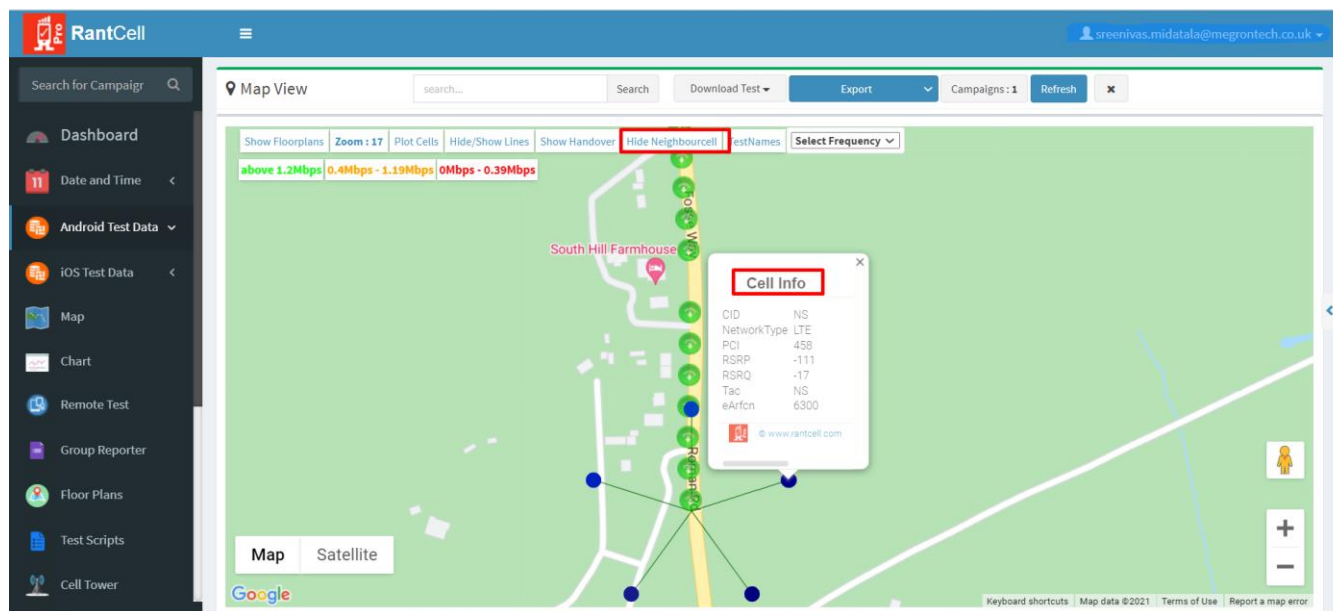
**Enable Rooted feature**   
 Captures additional RF parameters ex ARFCN, Ec/Io etc

**Launch Network Band Locking**  
 Allows user to lock Network Band (supported devices only)

Neighbour cell information will be highlighted in when clicked on data point. Click on Neighbour cells count to get spider view of cell neighbour.



Spider view showing strongest signal neighbor to lowest signal in clockwise.

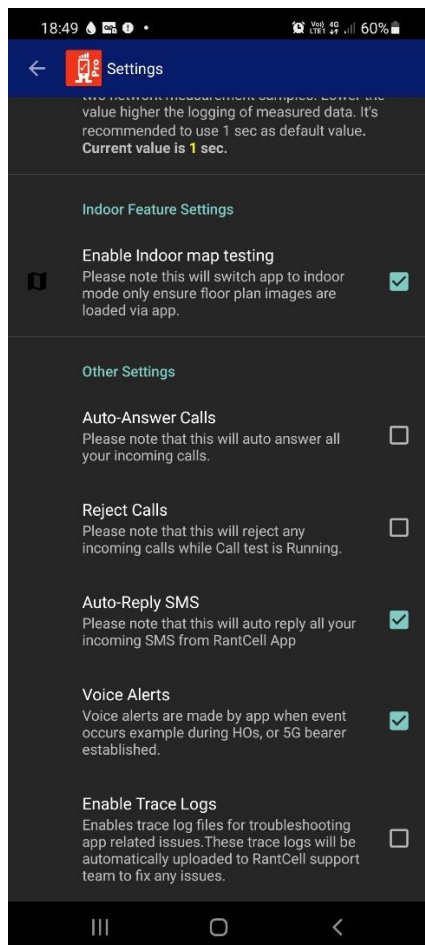


Neighbor information is also available when data is exported from RantCell dashboard or on App.

NeighbourCell_1_NetworkType	NeighbourCell_1_Cid	NeighbourCell_1_Pci	NeighbourCell_1_Rsrp	NeighbourCell_1_Rsrq	NeighbourCell_1_Tac	NeighbourCell_1_Arfrcn	NeighbourCell_1_Lac	NeighbourCell_1_bccArfc	NeighbourCell_1_uArfc	NeighbourCell_1_R	NeighbourCell_1_Ti	NeighbourCell_1_Neigh
Lte	NS	333	-104	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
4 Lte	NS	333	-101	-19 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
5 Lte	NS	333	-101	-19 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
6 Lte	NS	425	-101	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
7 Lte	NS	425	-101	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
8 Lte	NS	425	-101	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
9 Lte	NS	425	-97	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
10 Lte	NS	425	-91	-15 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
11 Lte	NS	425	-91	-15 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
12 Lte	NS	425	-91	-15 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
13 Lte	NS	425	-91	-15 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
14 Lte	NS	425	-76	-19 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
15 Lte	NS	425	-76	-19 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
16 Lte	NS	425	-76	-19 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
17 Lte	NS	425	-76	-19 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
18 Lte	NS	425	-76	-19 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
19 Lte	NS	59	-80	-12 NS	323 NS	NS	NS	NS	NS	NS	NS	NS
20 Lte	NS	59	-80	-12 NS	323 NS	NS	NS	NS	NS	NS	NS	NS
21 Lte	NS	59	-80	-12 NS	323 NS	NS	NS	NS	NS	NS	NS	NS
22 Lte	NS	59	-80	-12 NS	323 NS	NS	NS	NS	NS	NS	NS	NS
23 Lte	NS	59	-80	-12 NS	323 NS	NS	NS	NS	NS	NS	NS	NS
24 Lte	NS	36	-45	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
25 Lte	NS	38	-74	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
26 Lte	NS	38	-94	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
27 Lte	NS	38	-94	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
28 Lte	NS	38	-94	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
29 Lte	NS	38	-94	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
30 Lte	NS	38	-94	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
31 Lte	NS	38	-94	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
32 Lte	NS	362	-97	-16 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
33 Lte	NS	362	-97	-16 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
34 Lte	NS	362	-99	-17 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
35 Lte	NS	362	-99	-17 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
36 Lte	NS	425	-85	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
37 Lte	NS	362	-96	-17 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
38 Lte	NS	362	-97	-20 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
39 Lte	NS	362	-99	-18 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
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44 Lte	NS	362	-98	-17 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
45 Lte	NS	362	-98	-17 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS
46 Lte	NS	362	-98	-17 NS	6300 NS	NS	NS	NS	NS	NS	NS	NS

## Feature ID 1047: RantCell Pro app now has voice alerts.

Voice alert has been introduced in app, users can notice the voice alerts for speed test, http test, stream test and call test failed scenarios such as call Drop, Call setup failure. Please note that this feature needs to be enabled from settings on app (Voice Alerts must be selected). This feature is specifically useful when performing drive testing or walk testing.



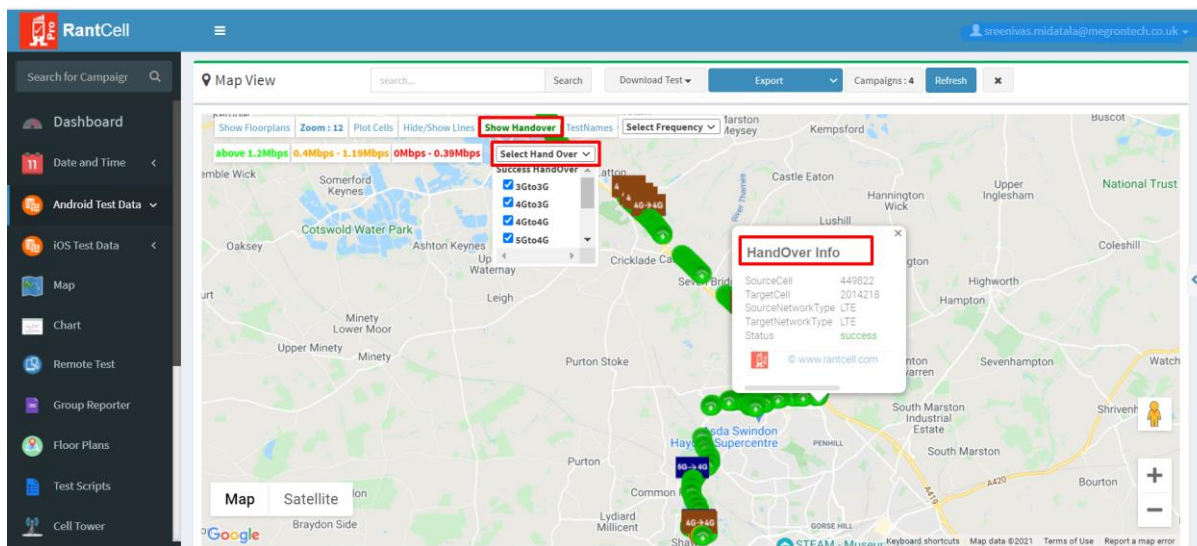
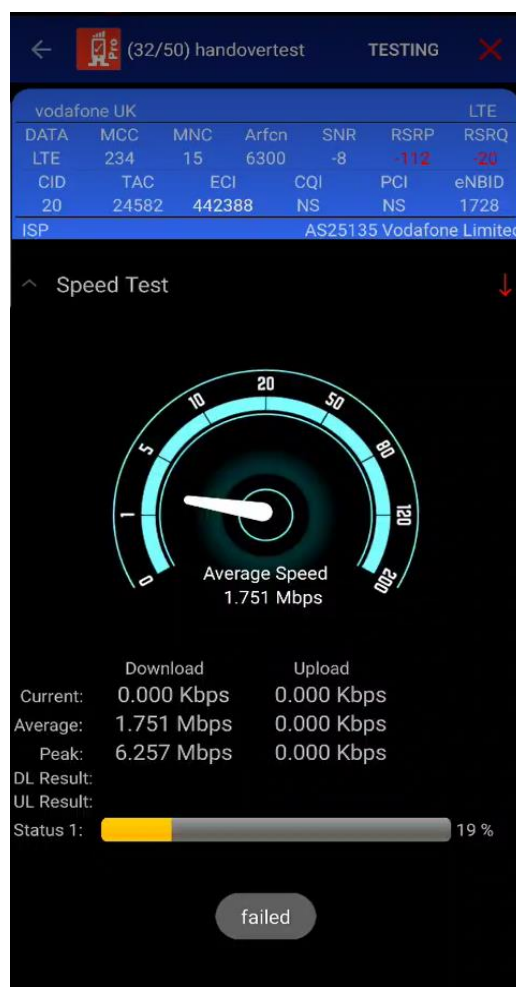
## Feature ID 1048: Handover success and failure computation

Handover feature as been introduced in app and in dashboard, KPIs such as handover success and failure alerts whenever cellular transmission (voice or data) is transferred from one base station (cell site) to another without losing connectivity to the cellular transmission. Users can view handover points in RantCell dashboard map view, table view and in handover Export file.

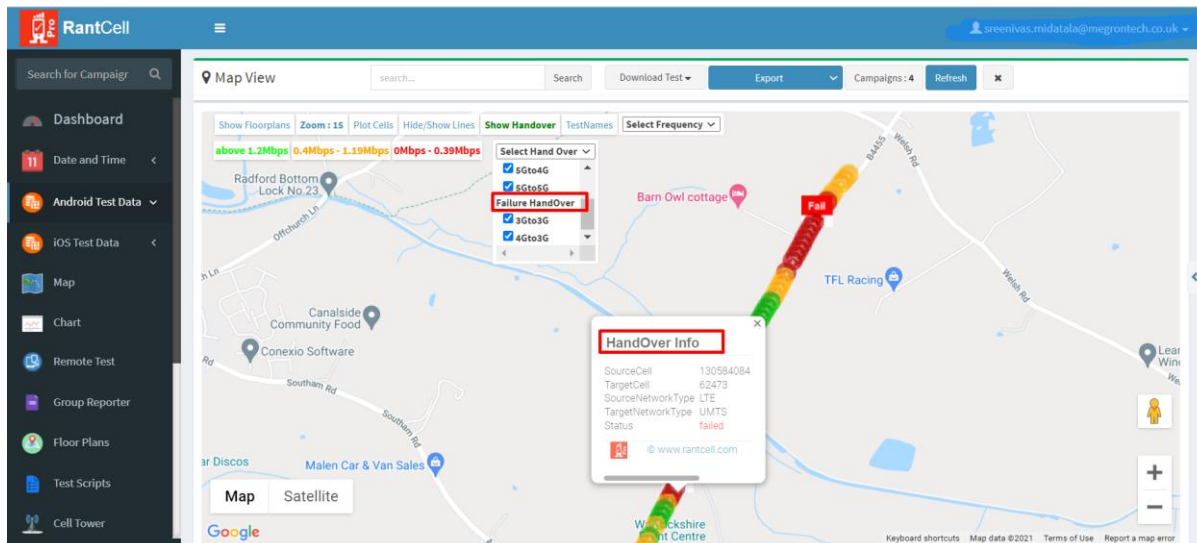
Note: HO KPIs are shown only for speed test, http test and stream tests only. KPIs definition as below

HO success when there is no loss of user data throughput i.e., uplink or downlink throughput does not fall to 0mbps during cell change or RAN technology change occurs.

HO failure when there is a loss of data when uplink or downlink throughput does fall to 0mbps for 1 sec or more during cell change or RAN technology change occurs.



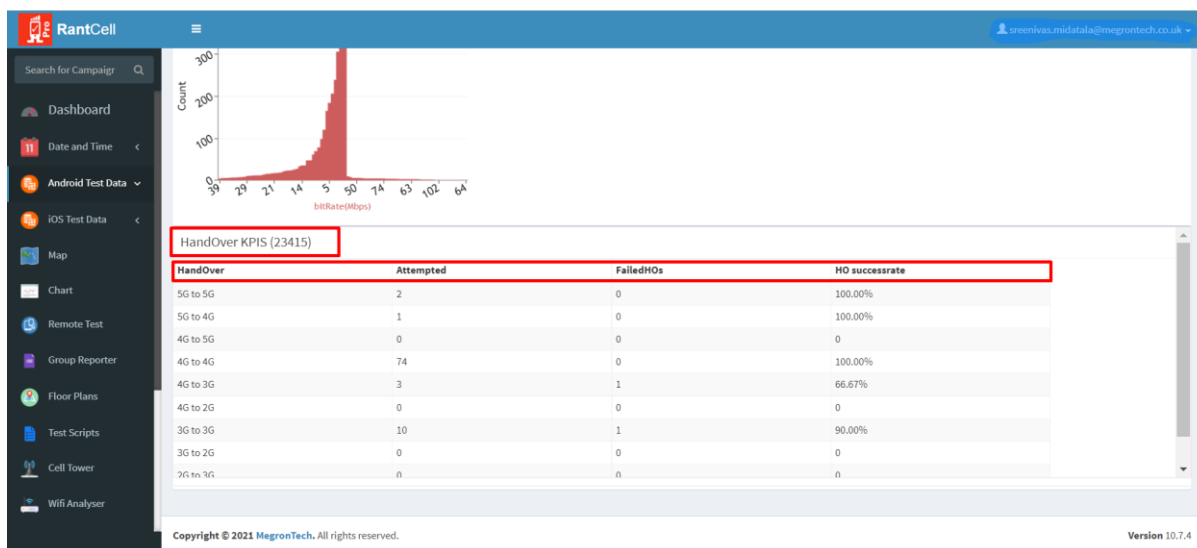




## HO KPIs

HandOver KPIs (23415)

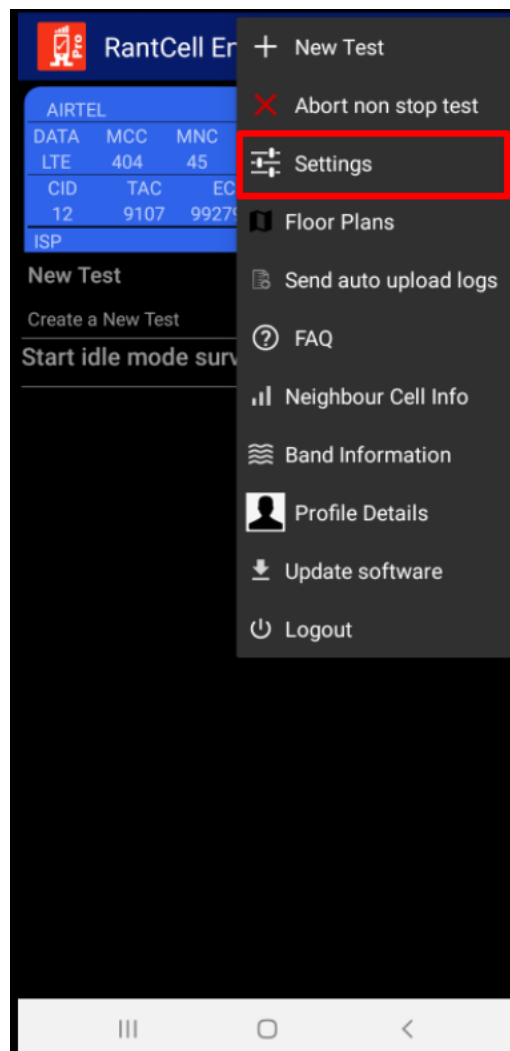
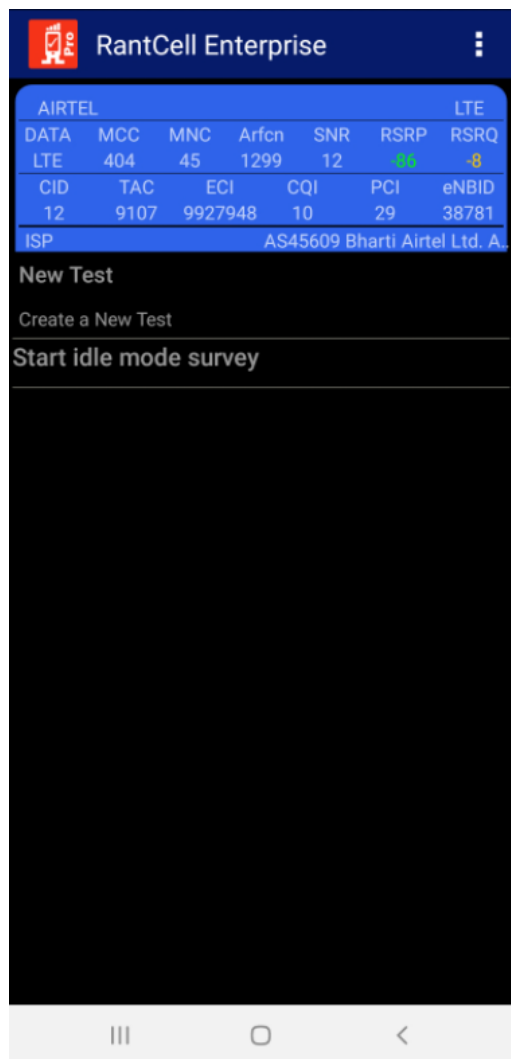
HandOver	Attempted	FailedHOs	HO successrate
5G to 5G	0	0	0
5G to 4G	0	0	0
4G to 5G	0	0	0
4G to 4G	143	0	100.00%
4G to 3G	0	0	0
4G to 2G	0	0	0
3G to 3G	2	0	100.00%
3G to 2G	0	0	0

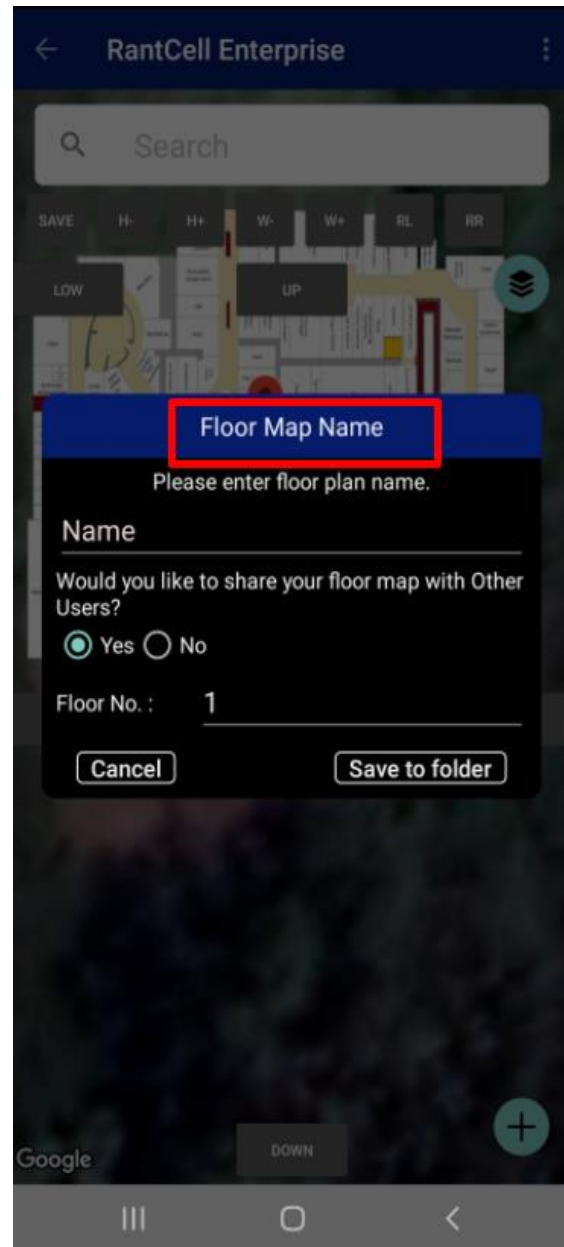
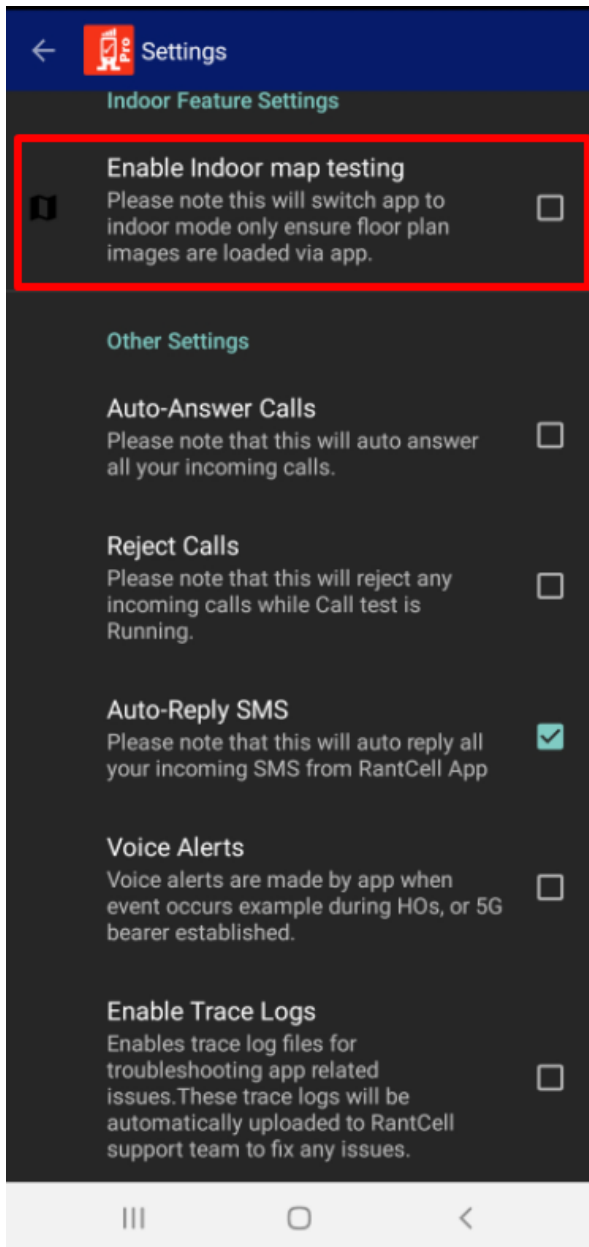


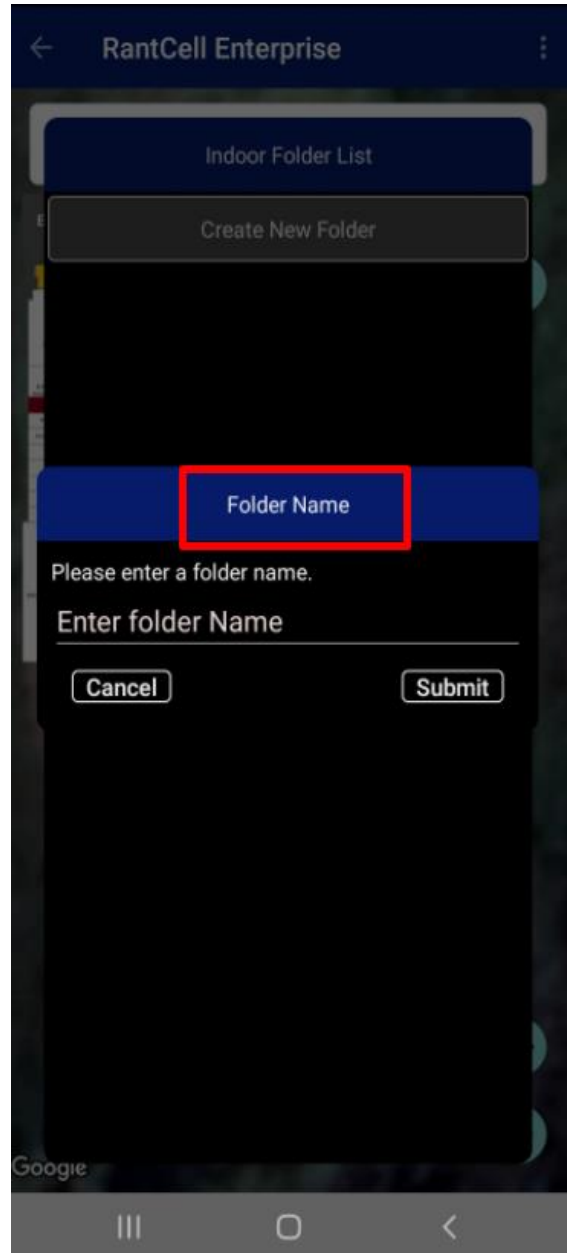
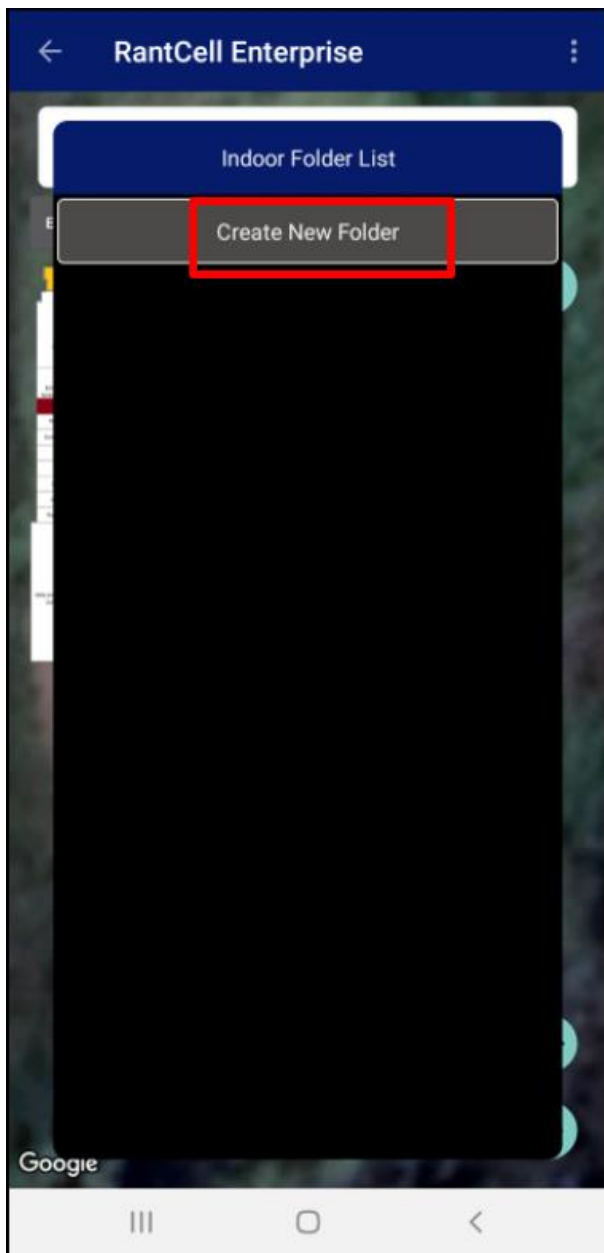


## Feature ID 1050: Better organization of indoor floor plans by folder structure

New folder wise floorplan saving mechanism as been introduced in app, Users can create a folder and add the floorplans with floor\_name, floor\_id. User can save and view the floorplan details. Example multiple client project named or building name folders can be created and floor plans respective to project or building can be saved under it.



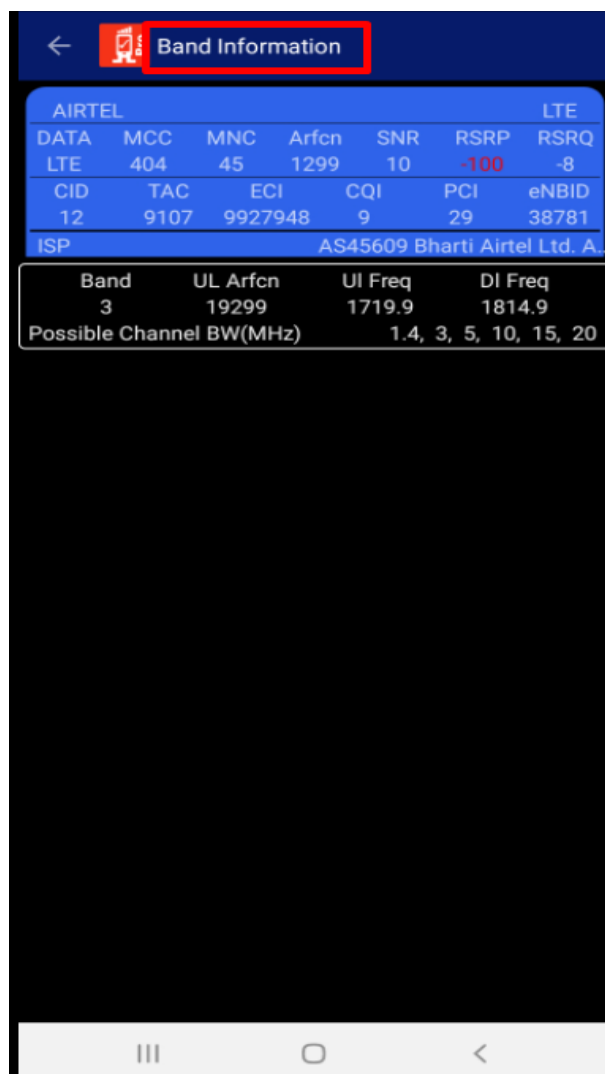






## Feature ID 1051: Band Information display UI

Band Information UI been introduced in this latest version of the app, Users can view the band information such as Band, UL Freq, DL Freq, UL Arfcn and Channel BW only for LTE network. UI can be accessed from setting menu, however this data is not stored in app or in RantCell cloud.



AIRTEL							LTE
DATA	MCC	MNC	Arfcn	SNR	RSRP	RSRQ	
LTE	404	45	1299	10	-100	-8	
CID	TAC	ECI	CQI	PCI	eNBID		
12	9107	9927948	9	29	38781		
ISP							AS45609 Bharti Airtel Ltd. A.
Band	UL Arfcn	UL Freq	DL Freq				
3	19299	1719.9	1814.9				
Possible Channel BW(MHz)			1.4, 3, 5, 10, 15, 20				

## Feature ID 1052: Day wise test campaigns scheduling

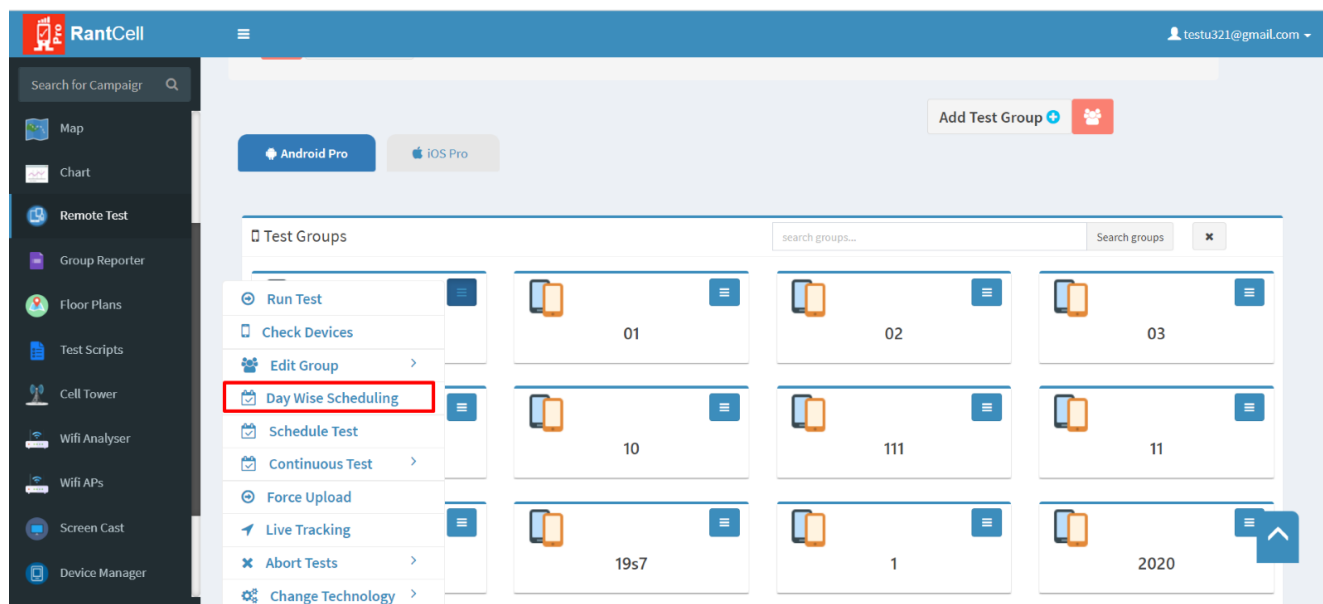
Day wise test campaigns scheduling has been introduced under Remote test feature in Dashboard, Users can schedule the Test campaigns based on the day of the week and time on a single device or a group of devices remotely. Example: On Monday run 30 voice call tests at 8am, at 12 pm run 20 upload download tests, at 6pm run 10 video stream tests. This can be repeated to other days of the week. Please refer to screenshot shared below.

This feature provides higher flexibility in testing when compared to continuous test on RAN network in static testing scenario such as monitoring remotely a important sites or in lab network load testing RAN.

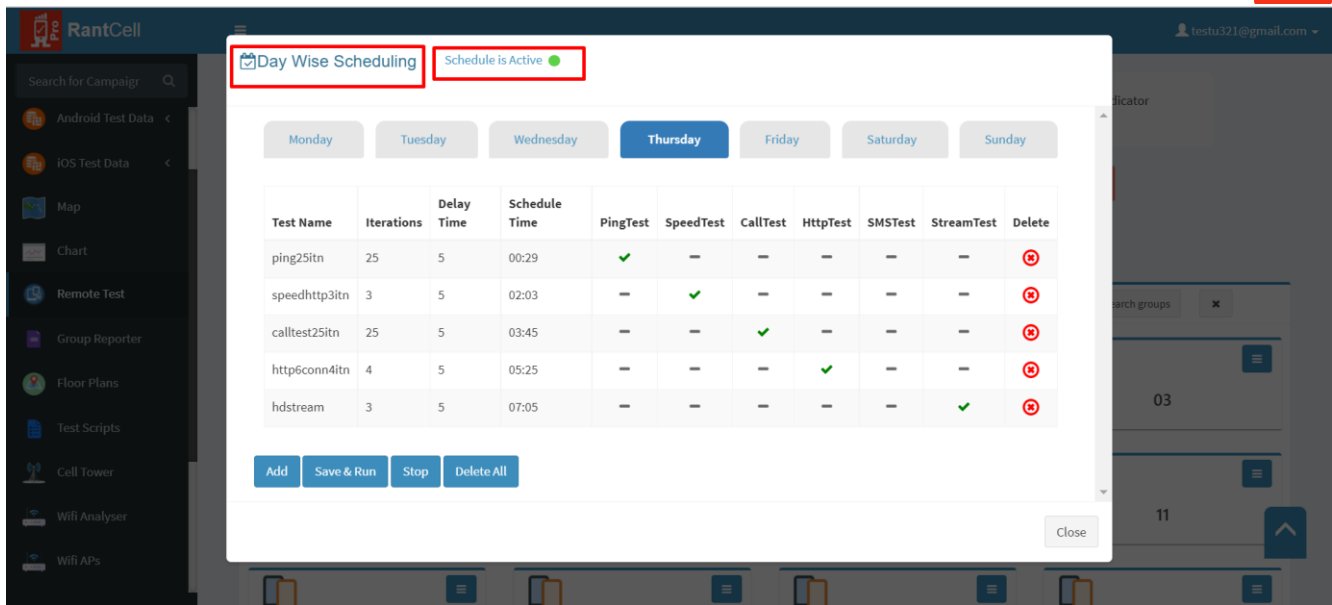
Beacon on remote test group indicates that day-based test is active.

NOTE: There must be minimum 90 minutes gap between test campaigns same on same day schedule.

More than 5 scheduled test campaigns is not supported for same day.

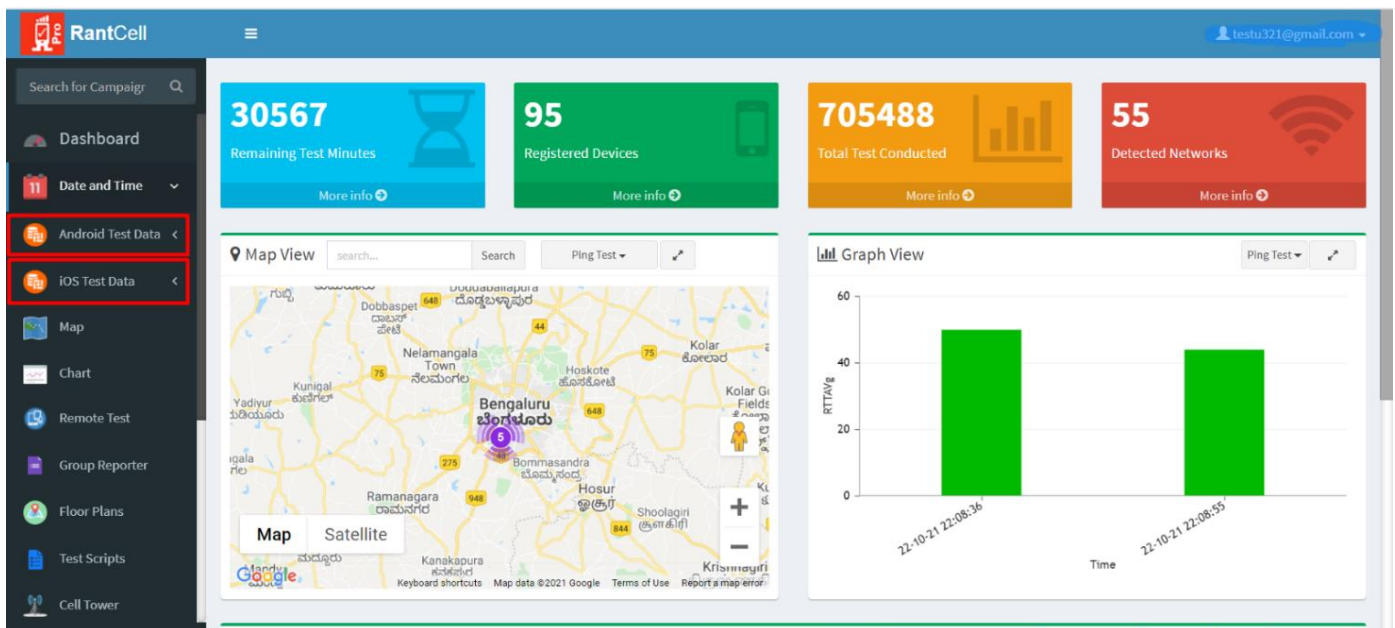






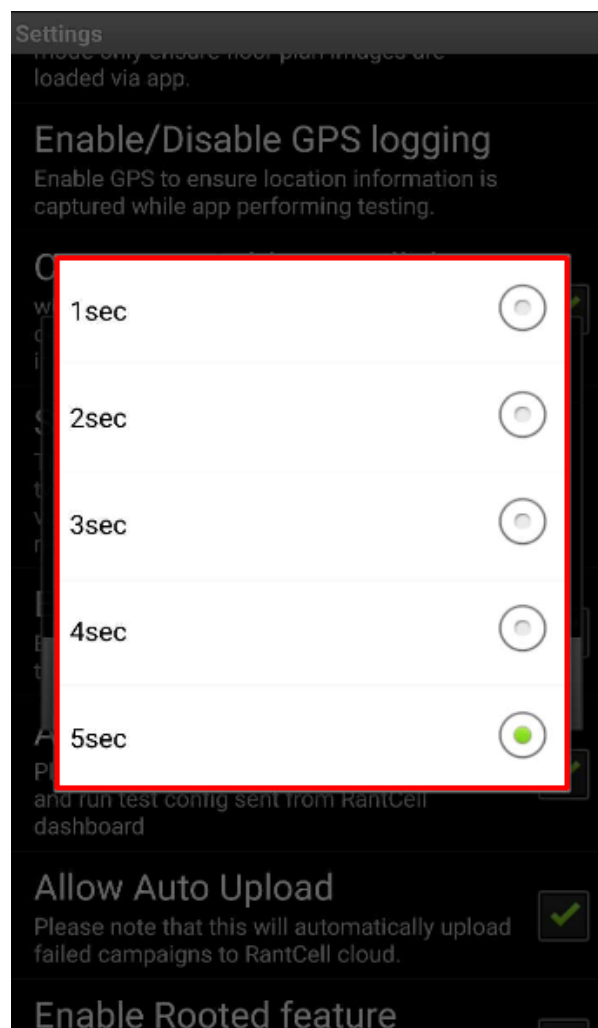
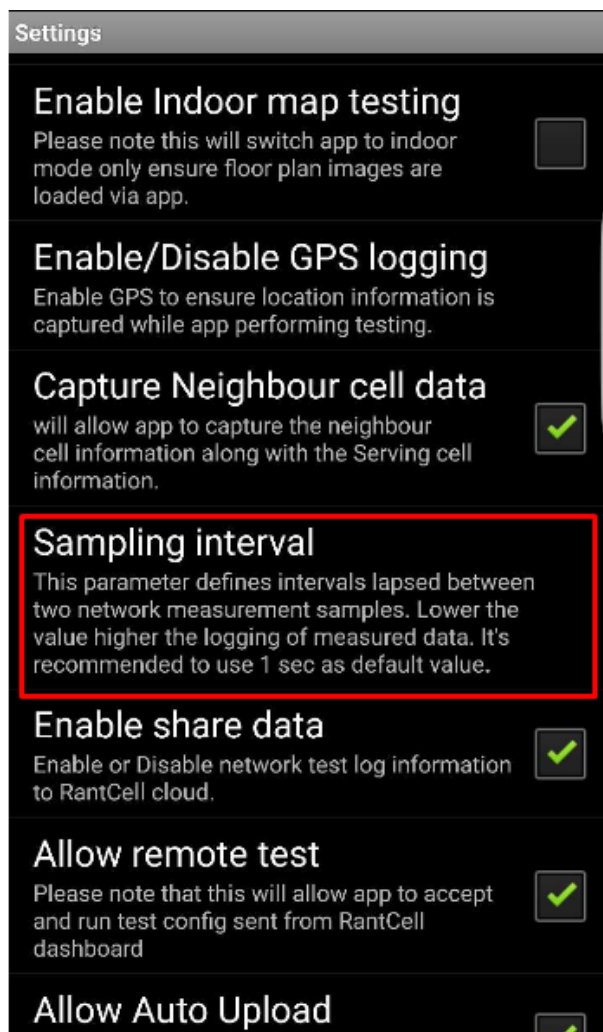
### Feature ID 1053: RantCell dashboard supports iOS RantCell Pro app.

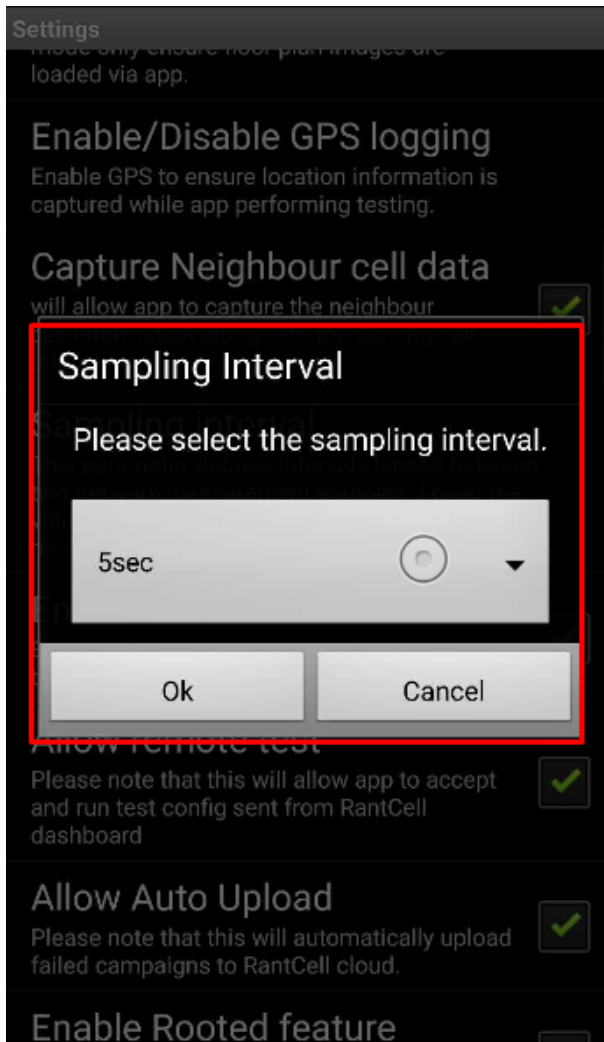
Android Test Data and IOS devices tree added in Dashboard, Users can view the Android test results or iOS related data separately as shown below.



## Feature ID 1054: Added an option to select sampling interval in settings

This parameter defines intervals lapsed between two network measurement samples. Lower the value higher the logging of measured data. It's recommended to use 1 sec as default value.







## Feature ID 1055: iOS RantCell Pro app for iPad and iPhone

<https://apps.apple.com/az/app/rantcell-pro/id1577906763>

iOS RantCell pro app has now been released which is also available in Apple store which supports data only tests such as ping and FTP based tests on both cellular & Wi-Fi networks which collects the parameters such as DATA, NETWORK TYPE, MNC, MCC, SIGNAL STRENGTH (RSSI, RSCP, RSRP, NR ssRSRP, NR csiRSRP & Wi-Fi RSSI), OPERATOR NAME, GPS. Please note that user name and password will be required to download the app.

Please note that its not possible to measure signals levels directly from iOS APIs hence following computation is being made,

Green (-65dbm) when all 4 signal bars highlighted on iOS device and score is 5 out of 5.

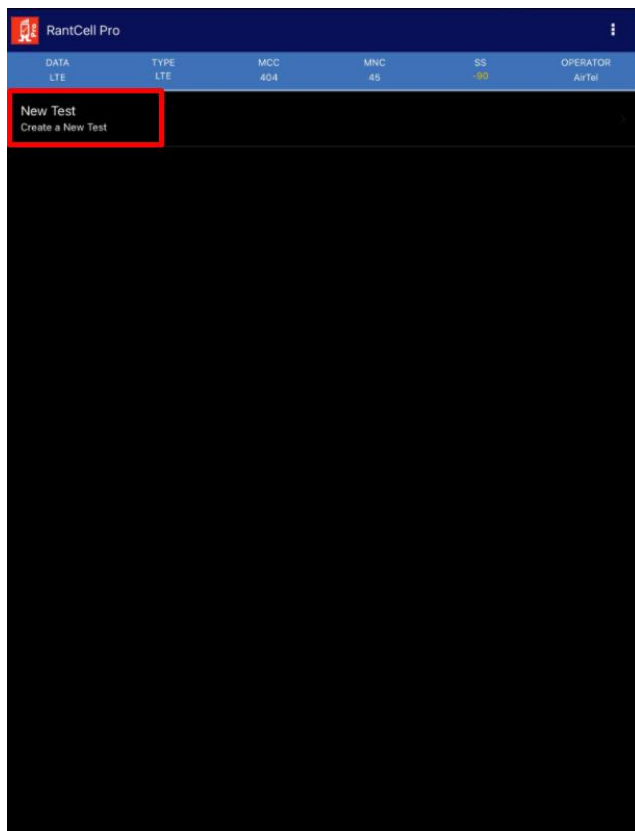
Green (-80dbm) when all 4 signal bars highlighted on iOS device and score is 4 out of 5.

Amber(-90dbm) when 2 signal bars highlighted on iOS device and score is 3 out of 5.

Red (-105dbm) when 2 signal bars highlighted on iOS device and score is 2 out of 5.

Grey (-113dbm) when 1 signal bars highlighted on iOS device and score is 1 out of 5.

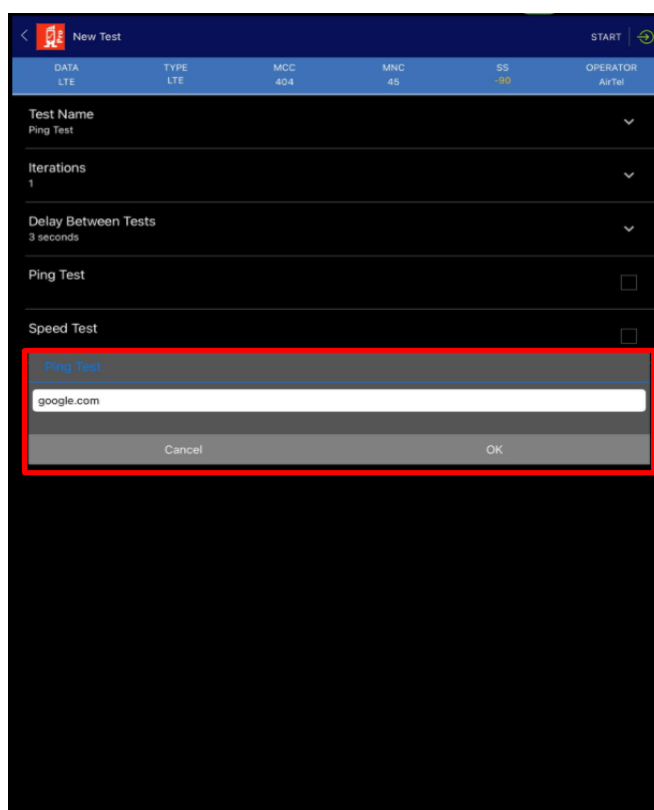
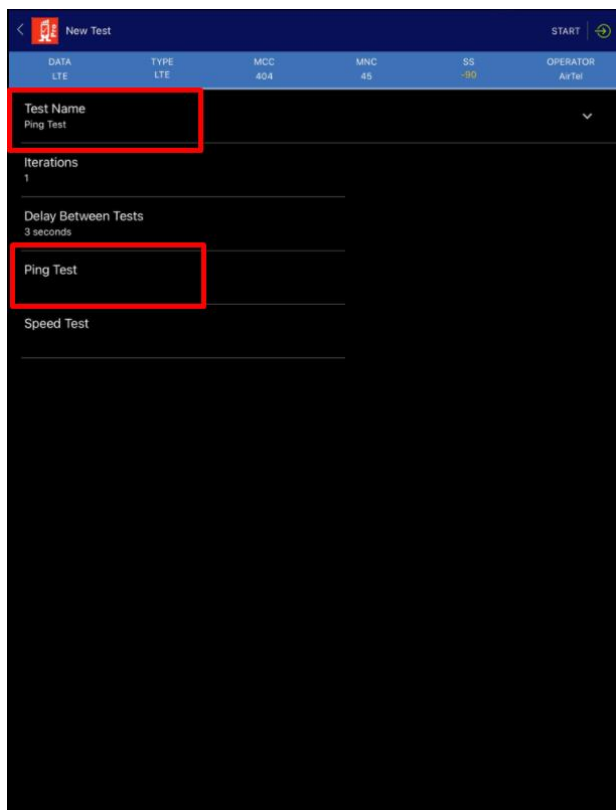
Grey (-120dbm) when no signal bars highlighted on iOS device and score is 0 out of 5.



## Feature ID 1056: Added ping test in iOS RantCell Pro app

Ping Test measures latency in ms (millisecond) for a packet of data on 2G, 3G, 4G, 5G and Wi-Fi Networks.

Latency measurement RTT max, RTT min, RTT avg (Ping size variable), Ping success rate, % Of dropped packets based on ping.



(1/1) Ping Test TESTING

DATA	TYPE	MCC	MNC	SS	OPERATOR
LTE	LTE	404	45	-90	AirTel

▼ Ping Test

Host: 142.250.205.238  
 Reply: RTT : 33 ms  
 Stats: 2 sent,2 received,0 error,0 % loss  
 RTT: Min: 33 Avg: 34 Max: 35 Mdev: 1

Ping Test EXPORT

DATA	TYPE	MCC	MNC	SS	OPERATOR
LTE	LTE	404	45	-90	AirTel

RESULTS DETAILS

▼ Ping Test

Host: google.com (142.250.205.238)  
 Packets:  
 Sent = 4, Received = 4 Lost = 0(0 %)  
 Round trip times (ms):  
 Min = 33, Avg = 37, Max = 47  
 Ping test success rate: 1/1 (100 %)

Ping Test EXPORT

DATA	TYPE	MCC	MNC	SS	OPERATOR
LTE	LTE	404	45	-90	AirTel

RESULTS DETAILS

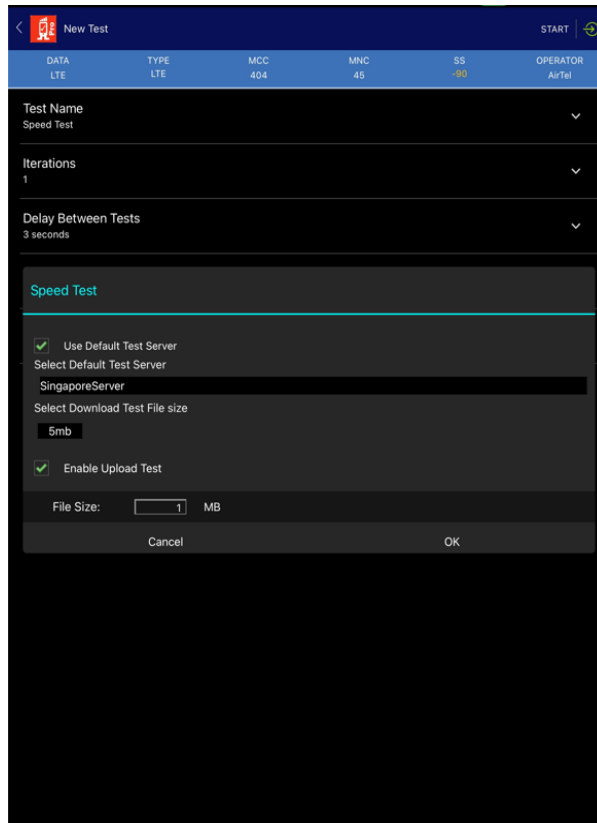
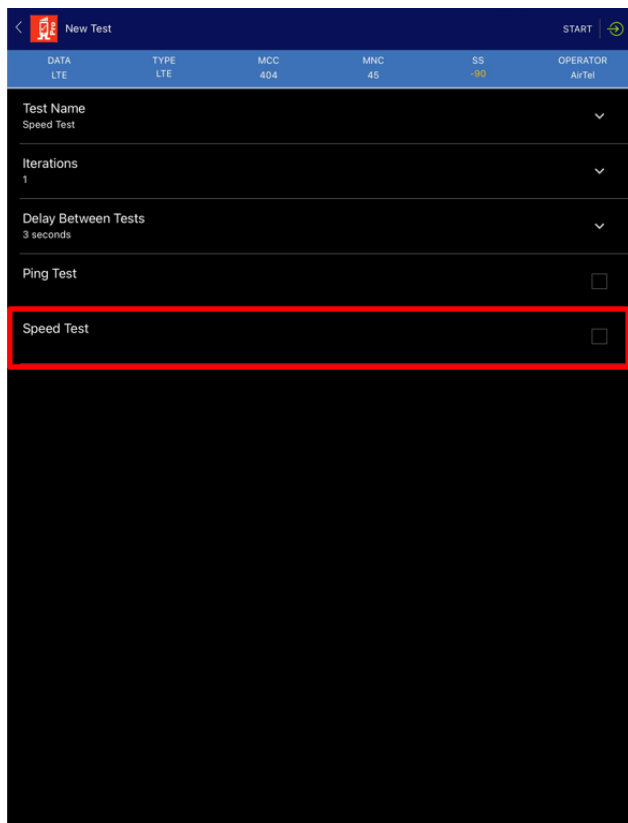
▼ Ping Test

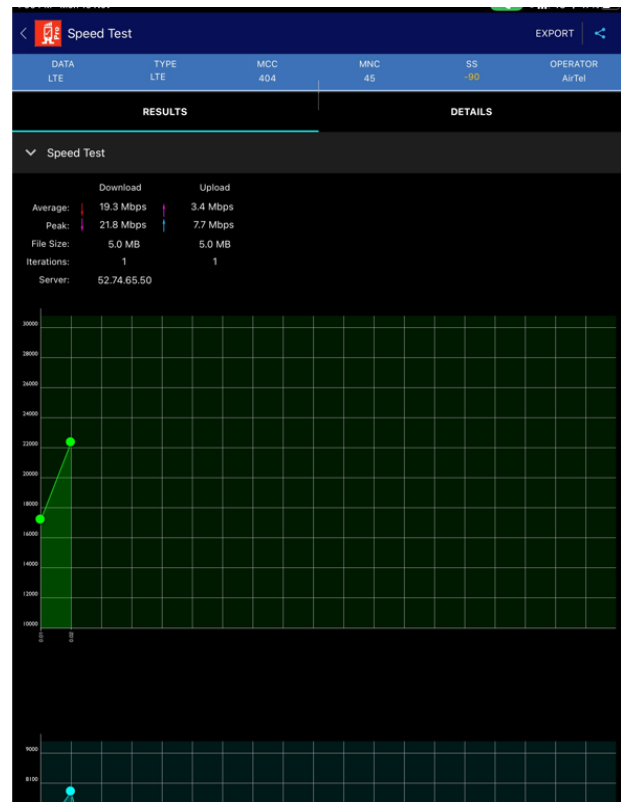
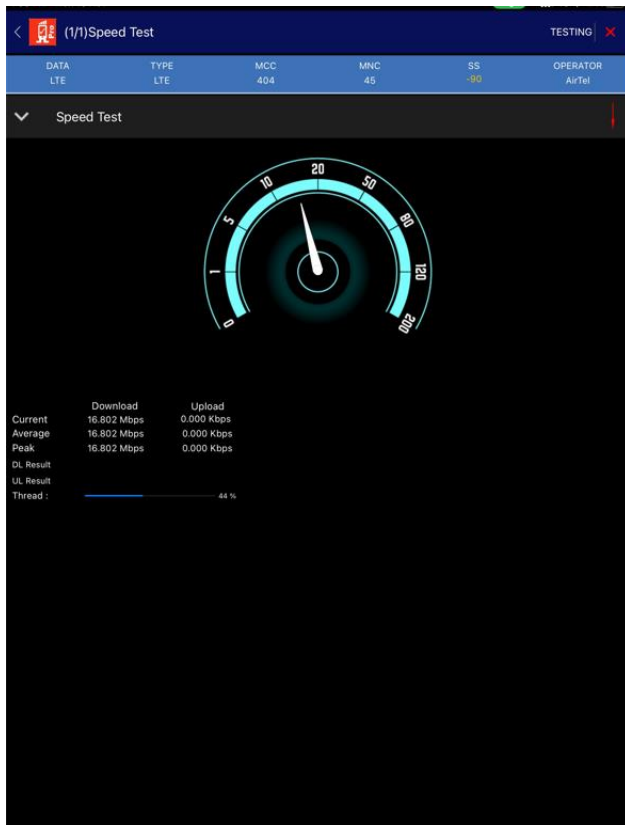
Timestamp	Packet Size	RTT Avg	Sent	Received	Status	Latitude	Longitude
11-15 01:41:24	64	37	4	4	OK	12.906284	77.559516

## Feature ID 1057: FTP test in iOS RantCell Pro app

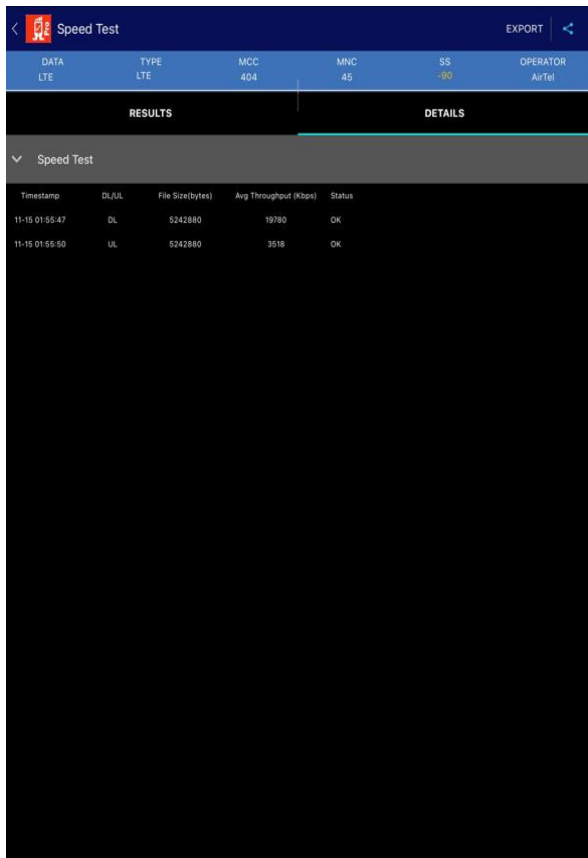
Speed Test measures network upload speed and download speed in mbps (Megabits Per Second)

FTP download speeds with session time and file size indicator, percentage of RAN technology type used (2G,3G,4G, 5G & Wi-Fi), signal level capture, FTP download average and Peak throughputs, FTP upload speeds with session time and file size indicator percentage of RAN technology type used (2G,3G,4G, 5G & Wi-Fi), signal level capture, FTP upload average and peak throughputs, Failure cases for FTP. User needs to select FTP server closest to your geolocation manually.









The screenshot shows the 'Speed Test' app interface. At the top, there is a header with the app name and an 'EXPORT' button. Below the header, there is a table with network details. The table has columns for DATA, TYPE, MCC, MNC, SS, and OPERATOR. The data row shows LTE, LTE, 404, 45, -00, and AirTel. Below this, there are two tabs: 'RESULTS' and 'DETAILS'. The 'RESULTS' tab is selected, showing a table with columns for Timestamp, DL/UL, File Size(bytes), Avg Throughput (Kbps), and Status. The data row shows 11-15 01:55:47, DL, 5242880, 19780, and OK. Below this, there is another row showing 11-15 01:55:50, UL, 5242880, 3518, and OK.

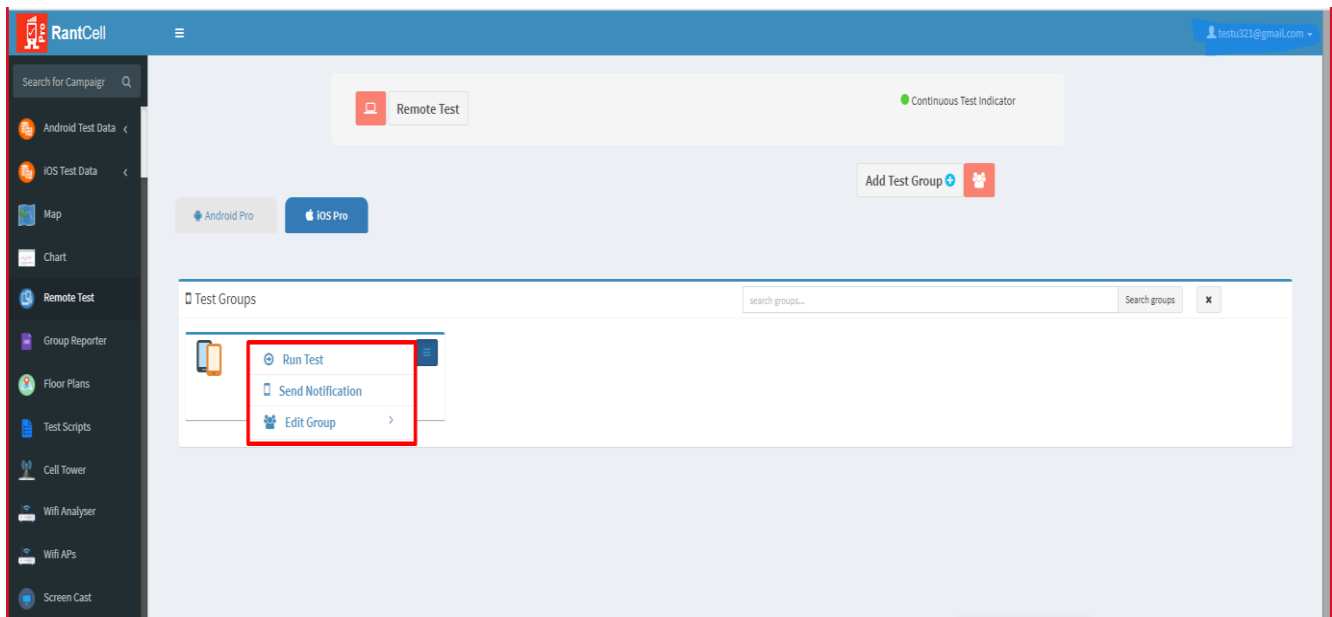
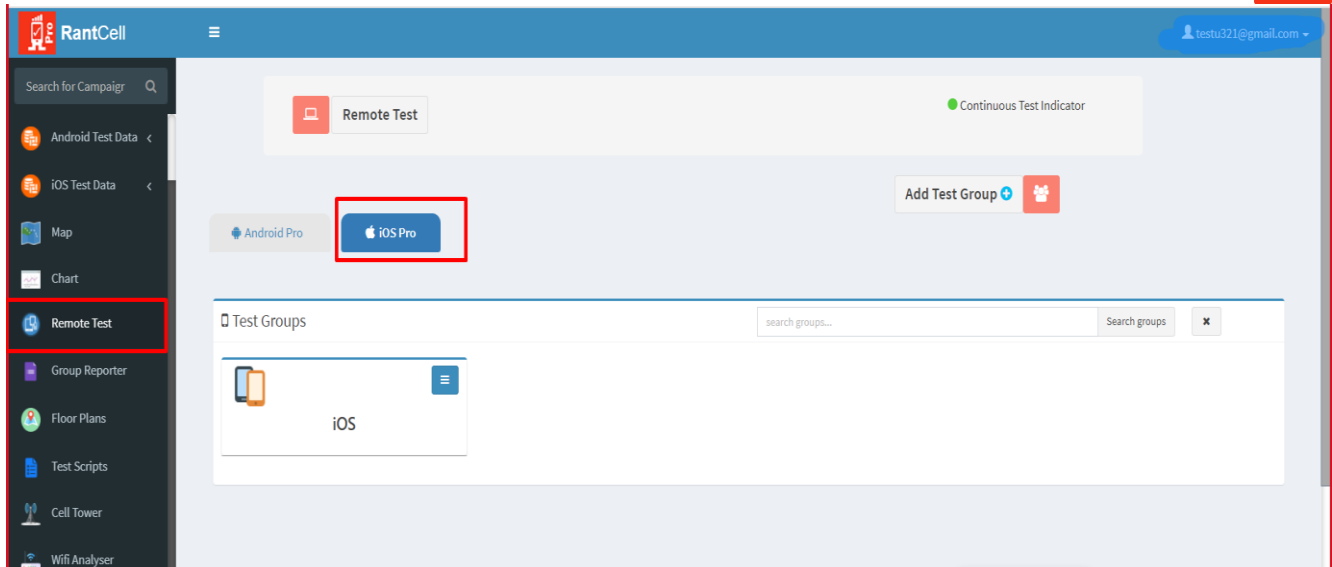
DATA	TYPE	MCC	MNC	SS	OPERATOR
LTE	LTE	404	45	-00	AirTel

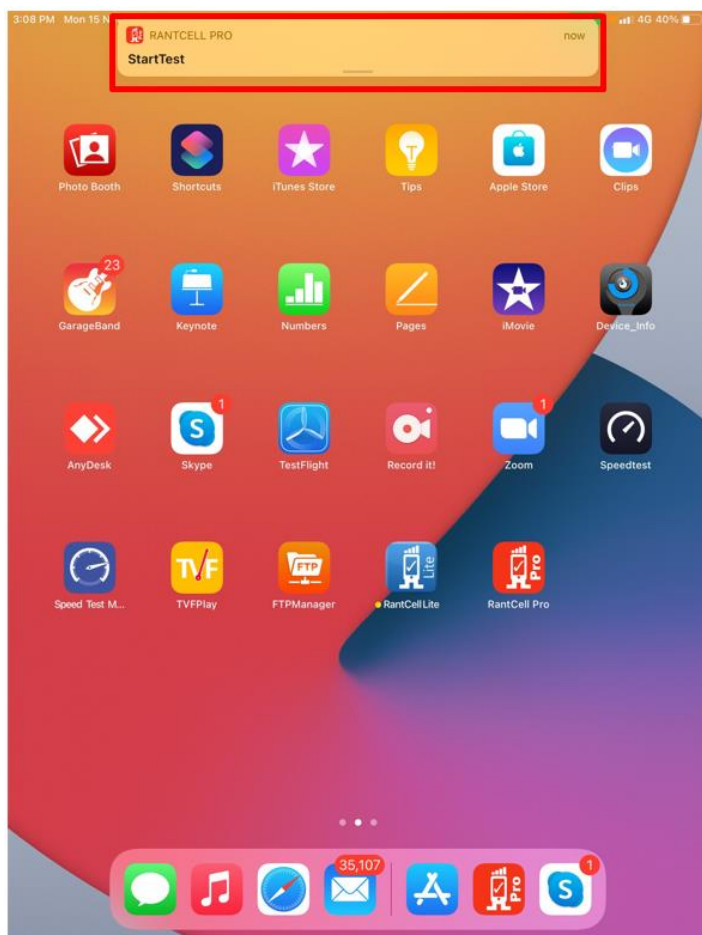
  

Timestamp	DL/UL	File Size(bytes)	Avg Throughput (Kbps)	Status
11-15 01:55:47	DL	5242880	19780	OK
11-15 01:55:50	UL	5242880	3518	OK

## Feature ID 1058: Remote test capabilities in Dashboard for iOS.

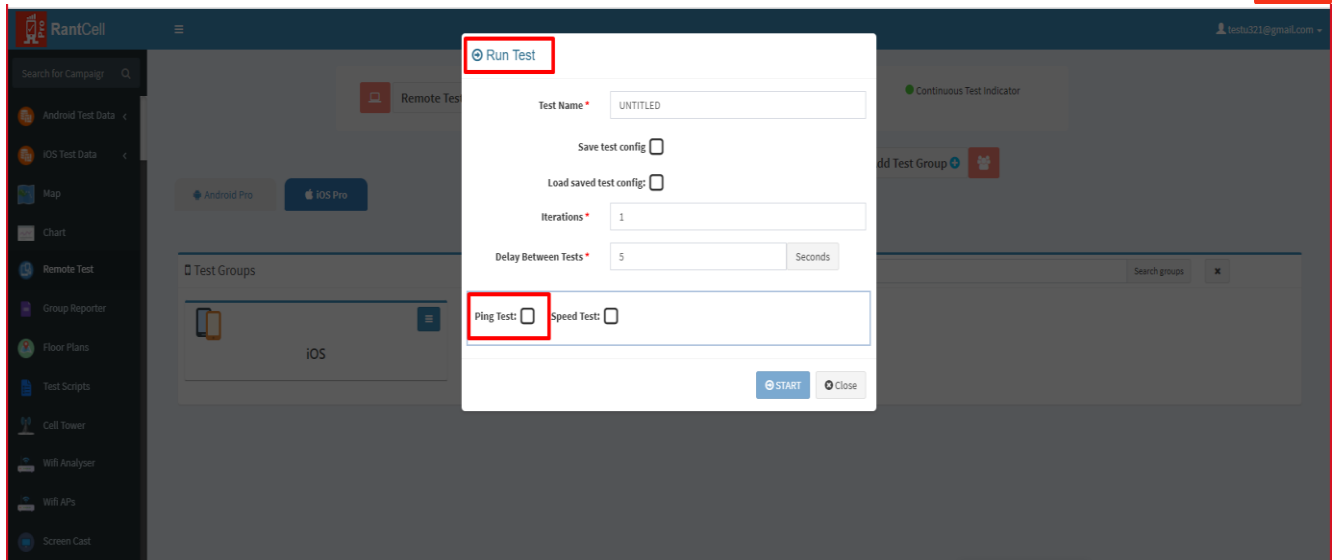
Remote test for iOS pro has been introduced under Remote test feature in Dashboard. Users can assign the Test configurations remotely through Dashboard. Please refer to screenshot shared below. Please note that tests do not run automatically on iOS devices like in Android, user needs to tap on iOS once the notification is received on iOS device as shown below.





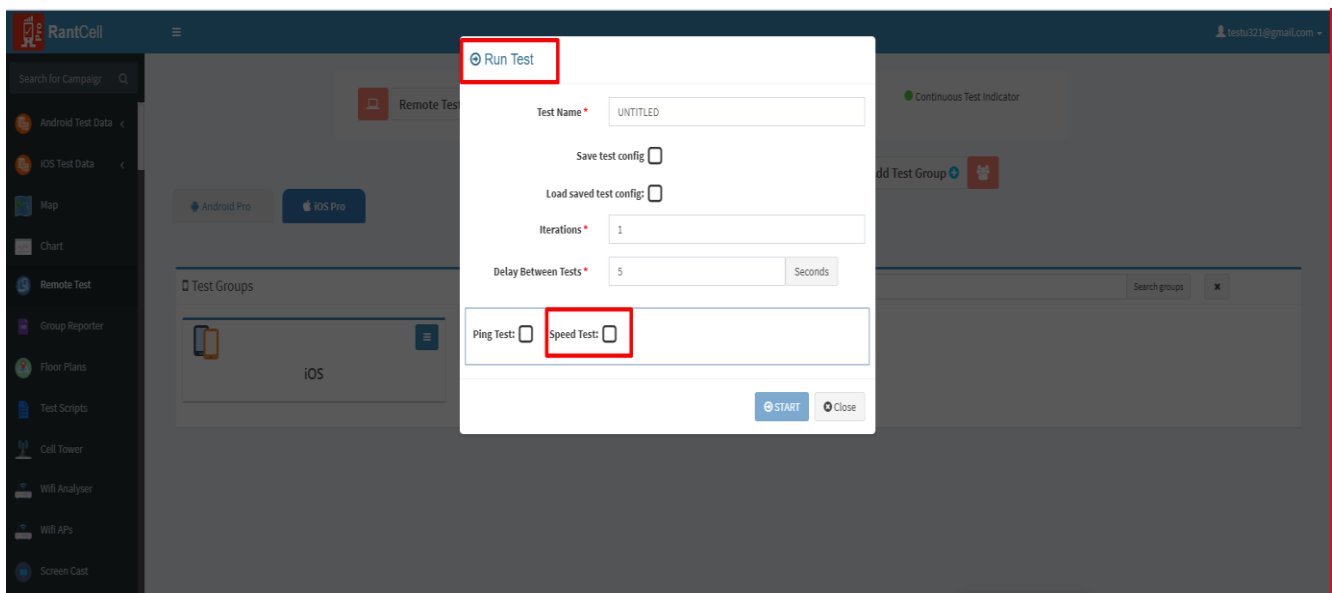
## Feature ID 1059: Ping test capabilities in Dashboard for iOS.

Remote ping test for iOS pro has been introduced under Remote test feature in Dashboard. Users can assign the ping Test configurations from Dashboard. Please note for ping to start on iOS device user needs to click on notification on iOS tab.



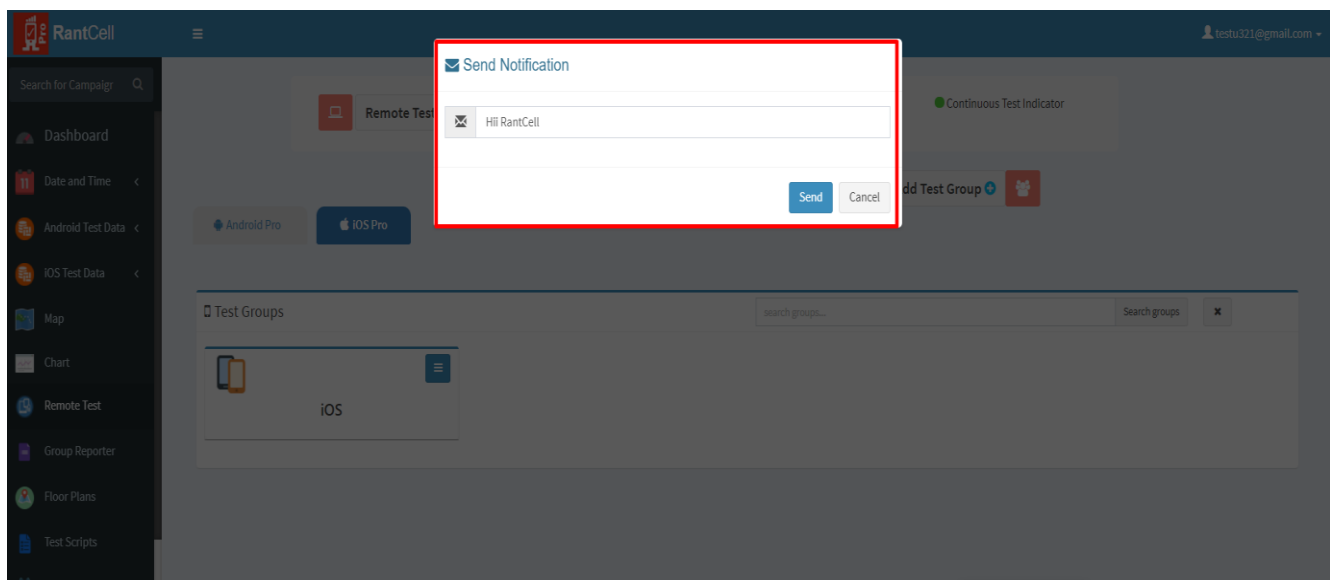
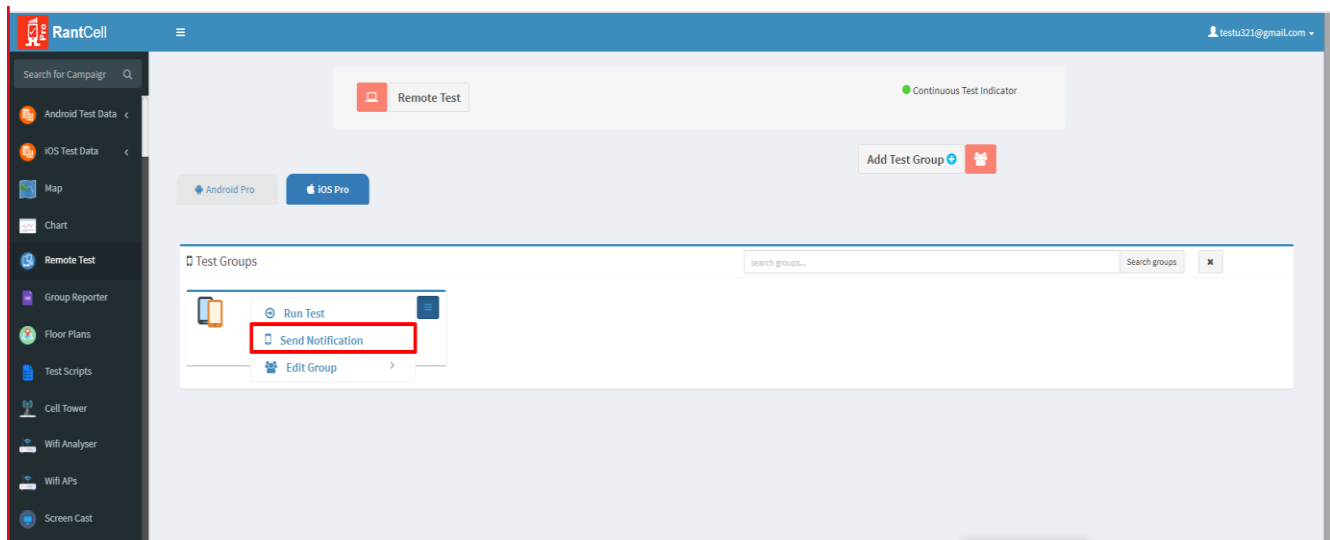
## Feature ID 1060: Remote speed test capabilities in Dashboard for iOS.

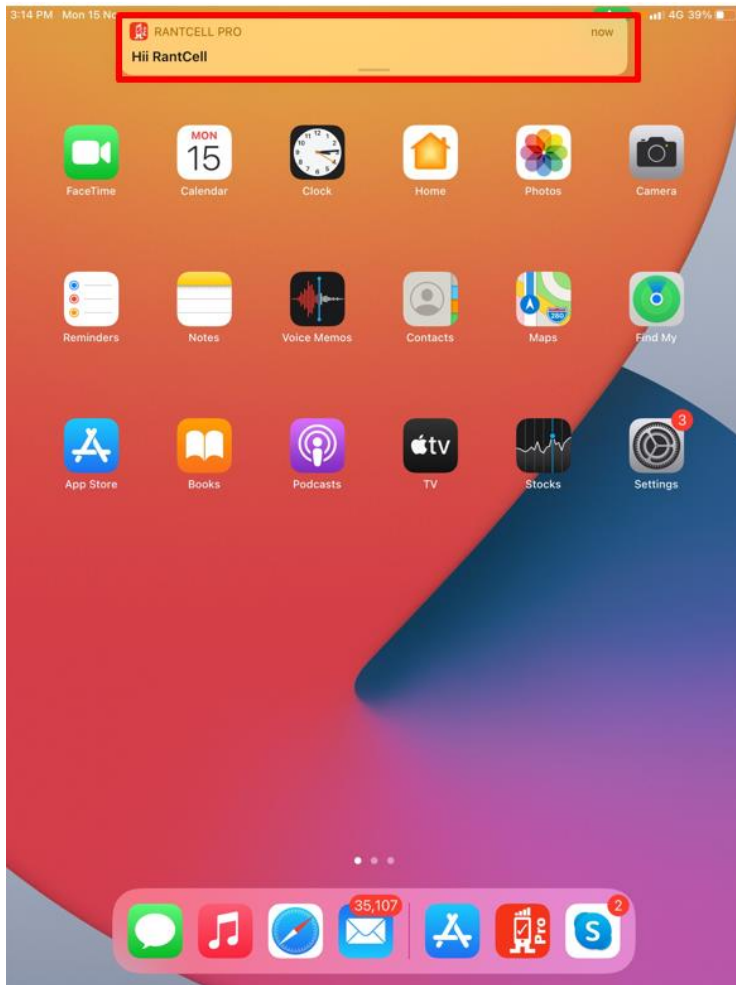
Remote speed test for iOS pro has been introduced under Remote test feature in Dashboard. Users can assign the speed Test configurations from Dashboard. Please note user needs to tap on notification message on the iOS device for it to start speed tests.



## Feature ID 1061: Added send notifications capabilities in Dashboard for iOS.

Remote send notifications for iOS pro has been introduced under Remote test feature in Dashboard. Users can send text notifications from dashboard, for example to run tests in certain locations etc.





## Feature ID 1062: Added features under App menu for iOS app.

iOS RantCell pro app menu includes the features such new test, settings, send logs to developer, FAQ, profile details and logout. Under settings there is an option to Enable/disable share data & enable/disable GPS logging.

