

ASMS report

For phase 1

1. User interface for Automation Spectrum Management System:

PTD
POSTS AND TELECOMMUNICATIONS DEPARTMENT

Spectrum-E

Username

Password

☐ Remember Me [Forgot/Reset Password](#)

[Login](#)

[Subscribe](#) [Request Access / Contact Us](#)

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2. After log-in, the home page interface for user:

Spectrum-E Home Datastore Network Map

Welcome Admin User to the Spectrum-E Portal

You are logged in as **Admin**.

e-Licensing

Create new requests for managing your services, radio objects and licenses

Documentation

The Documentation page features guides and manuals for Spectrum-E

RF Calculators

Convert between units, calculate KTB, satellite look angles and more.

My Networks

The My Networks page allows the user to create new networks and manage existing networks

My Predictions

The My Predictions page allows the user to manage existing predictions

My Archive

The My Archive page stores selected networks and predictions for better organization

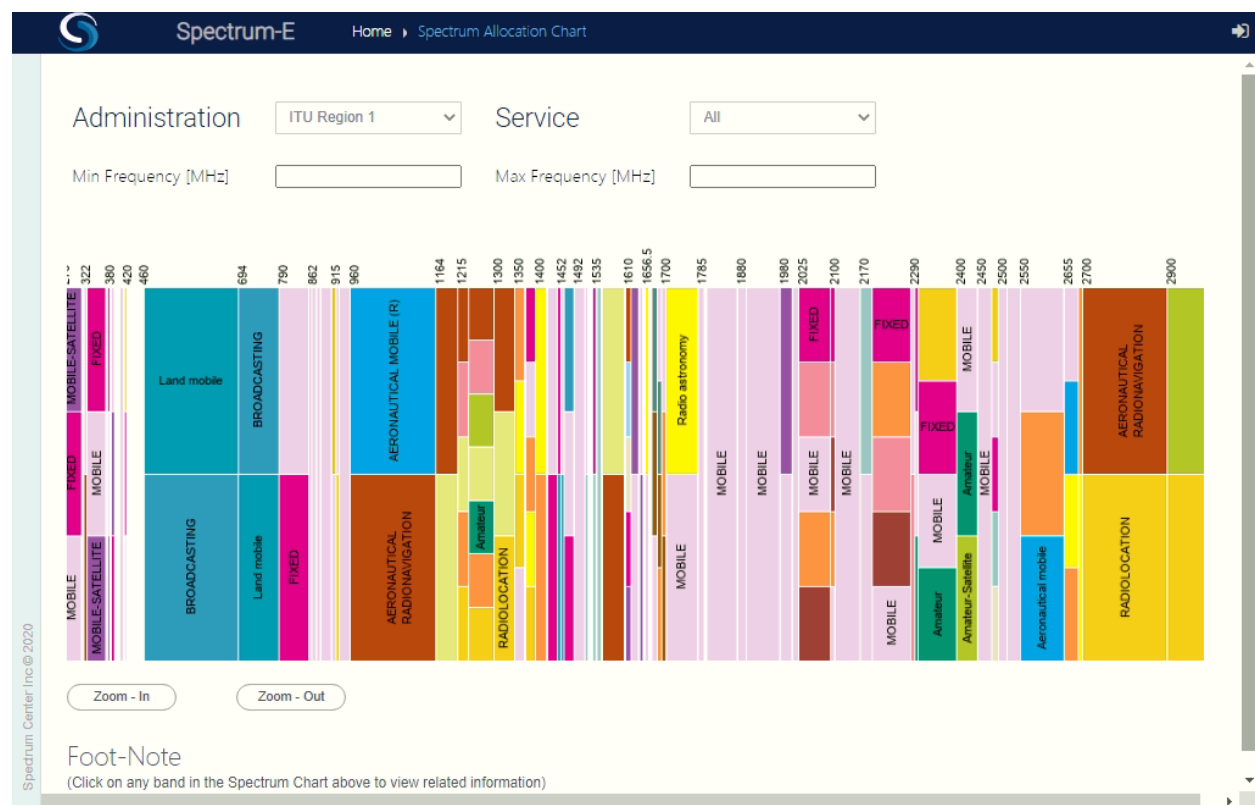
Spectrum Chart


The Spectrum Chart page features an interactive frequency band diagram with frequency band information

Spectrum Planning



Tools for Spectrum Planning and Spectrum Chart configuration.

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Spectrum-E

[Home](#)
[Datastore](#)
[Network](#)
[Map](#)

PTDd



Datastore

- Organizations
- Type Approval
- TV and Radio Terrestrial Broadcast
- Terrestrial Fixed and Mobile Services
- Fixed and Mobile Satellite Services (...)
- Maritime Services
- Aeronautical Services
- Settings

- Add Attachment
- Add Licensee Info
- Select Licensee

Registered Organizations

1

[Requests](#)
[Licensed](#)
[Statistics](#)

114 records in total
1 - 30
Refresh
Filter

#	state	LicenseeId	LicenseeName	LicenseeAc
1	(ORG-04) Active	SE/TST/001/2020	Test Organization	TST
2	(ORG-04) Active	BRM/CAL/001/2020	Chinnery Assets Limited	CAL
3	(ORG-04) Active	BRM/DIC/002/2020	Daewoo International Corporation (Myanmar E&P)	DIC
4	(ORG-04) Active	BRM/YTC/004/2020	Myanmar Yang Tse Copper Co.,Ltd	YTC
5	(ORG-04) Active	BRM/PCM/023/2020	PC Myanmar (Hong Kong)	PCM
6	(ORG-04) Active	BRM/PPM/006/2020	Premier Petroleum Myanmar Limited	PPM
7	(ORG-04) Active	BRM/PTTEP/059/2020	PTTEP International Limited(Yangon Branch)	PTTEP
8	(ORG-04) Active	BRM/SEACO/008/2020	South East Asia Crude Oil Pipeline Co.,Ltd	SEACO
9	(ORG-04) Active	BRM/SEAG/009/2020	South East Asia Gas Pipeline Co.,Ltd	SEAG
10	(ORG-04) Active	BRM/DCA/010/2020	Department of Civil Aviation	DCA
11	(ORG-04) Active	BRM/EAL/011/2020	Emirates Air Line	EAL
12	(ORG-04) Active	BRM/MITT/012/2020	M.I.T.T	MITT
13	(ORG-04) Active	BRM/WMP/013/2020	Wilmar Myanmar Port Terminals	WMP
14	(ORG-04) Active	BRM/IBT/014/2020	International Bulk Terminal Thilawa	IBT
15	(ORG-04) Active	BRM/MKH/015/2020	Myanmar Kong Hua Co.,Ltd	MKH
16	(ORG-04) Active	BRM/MIP/016/2020	Myanmar Industrial Port	MIP
17	(ORG-04) Active	BRM/CCP/017/2020	Coca-Cola Pinya Beverages Myanmar Ltd	CCP
18	(ORG-04) Active	BRM/GPD/018/2020	GEO-PSI Drilling Co.,Ltd	GPD

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5. Calculation for RF signal

The screenshot shows the 'Calculators' section of the Spectrum-E application. It features three main calculation areas: Frequency Dependent Rejection, Power, and Field Strength. Each area has input fields for various parameters and a 'calculate' button.

Frequency Dependent Rejection

Tx Frequency: 1760 MHz
Tx Emission Designator: 2K00N0N
Rx Frequency: 1762.5 MHz
Rx Emission Designator: 5M00D7W
FDR: dB

Power

Tx Power: dBm
To: dBm
Bandwidth: 11.2 kHz

Field Strength

Rx Power: dBm

Vertical text on the left: Spectrum Center Inc © 2020

6. User can make the network data for checking and manage

The screenshot shows the 'Current Network' and 'Existing Networks' sections of the Spectrum-E application. The 'Current Network' section has buttons for 'Rename', 'Duplicate', and 'Send To'. The 'Existing Networks' section displays a table of network data with columns for 'last modified', 'name', 'size', and 'action'.

Current Network default

Rename Duplicate Send To

Existing Networks

last modified	name	size	action
Dec 11 2020 15:21:49	MW Training Part 3 Session 7	88.2 KB	select archive delete
Dec 11 2020 15:21:39	Matagami	3.7 KB	select archive delete
Dec 11 2020 15:02:05	MW Links MPT	12745.2 KB	select archive delete
Oct 20 2020 15:37:37	PTD Training Part 2 Session 7	13.5 KB	select archive delete
Oct 20 2020 15:37:27	PTD Training Part 2 Session 3	20.7 KB	select archive delete
Oct 19 2020 10:50:47	test	75.3 KB	select archive delete
Oct 18 2020 21:28:12	COMIT Test	1018.6 KB	select archive delete
Oct 18 2020 20:04:56	M2K	69.4 KB	select archive delete
Oct 10 2020 01:07:25	HF_ALE_NVIS_demo	4.9 KB	select archive delete
Oct 07 2020 20:08:02	FCC 6 GHz MW links	6643.2 KB	select archive delete
Sep 30 2020 23:49:33	LMR_SFNSimulcast_demo	9.4 KB	select archive delete
Sep 30 2020 00:30:47	FM_Broadcast_demo	2.3 KB	select archive delete
Sep 17 2020 12:51:02	Webinar_June_5_2019_copy	2767 KB	select archive delete

Create New Network

Enter Network Name

Create

Vertical text on the left: Spectrum Center Inc © 2020

7. User can make the prediction or simulation for the network:

Current Prediction

Unselect Rename

Existing Predictions

last modified	name	action
Dec 11 2020 15:36:23	DL_dbu_Composite_dbu	archive delete
Dec 11 2020 15:36:09	DL_dbm_Composite_dbm	archive delete
Dec 11 2020 15:35:56	UL_Composite_dbm	archive delete
Oct 28 2020 11:17:40	DL_Matagami_1812_dbm	archive delete
Oct 28 2020 11:17:13	DL_Matagami_1546_dbm	archive delete
Oct 28 2020 08:07:09	DL_dbm_Matagami_1546_dbm	archive delete
Oct 28 2020 08:04:41	DL_dbm_Matagami_dbm	archive delete
Oct 23 2020 15:02:15	DL_Overlap_dot	archive delete
Oct 09 2020 11:11:16	DL_dbm_1812_dbm	archive delete
Oct 09 2020 09:24:15	DL_dbm_1812_comit_dbm	archive delete
Oct 05 2020 21:44:26	itu412_dot	archive delete
Oct 02 2020 15:34:12	cimap_rgb	archive delete
Oct 02 2020 14:29:26	XZK_dbu	archive delete
Jul 28 2020 10:19:16	DL_Overlap_rgb	archive delete
Jul 21 2020 15:48:46	DL_dbu_Composite3_dbu	archive delete
Jul 21 2020 15:42:02	ok_dbu	archive delete
Jul 21 2020 13:21:17	HF_Composite_snr	archive delete

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8. Can make frequency planning:

Datastore

Chart
Chart Workspace
Committee

Select All
Unselect All
Toggle List/Block View
Download
Export to Spectrum Chart

Spectrum Planning


Allocations Channels Notes Services

413 records in total | 1 - 30 | 30 | Refresh | Filter

#	state	lowerFreq	upperFreq	Services Name	Service
1	(BAN-A0) SPL Allocation	0	0.009	Not allocated	NA
2	(BAN-A0) SPL Allocation	0.009	0.014	Meteorological aids Radionavigation	MLA RN
3	(BAN-A0) SPL Allocation	0.014	0.01995	Fixed Maritime mobile	F MM
4	(BAN-A0) SPL Allocation	0.01995	0.02005	Standard frequency and time signal	SFT
5	(BAN-A0) SPL Allocation	0.02005	0.07	Fixed Maritime mobile	F MM
6	(BAN-A0) SPL Allocation	0.07	0.072	Radionavigation Fixed Maritime mobile	RN F MM
7	(BAN-A0) SPL Allocation	0.072	0.084	Fixed Maritime mobile Radionavigation	F MM RN
8	(BAN-A0) SPL Allocation	0.084	0.086	Radionavigation Fixed Maritime mobile	RN F MM
9	(BAN-A0) SPL Allocation	0.086	0.09	Fixed Maritime mobile	F MM

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9. Engineering module

 **Spectrum-E**

HomeDatastoreNetworkMap

default

> Network Management

Add/View/Edit Object

Modify Selected Objects

Delete Selected Objects

Delete All Objects

Map Selected Object

Convert Selected Objects

Check Google Map

Generate Report

Antennas

Calculators

ERP Calculator

Safe Harbor Calculator

Open Sensor

Import FCC ULS LM-Priv Assi...

Import TAFL Assignments

Frequency Plan Validation

Manage Frequency Plans


Distance to Border

Adjust UTX and Datt...

Object Type: Tx/Rx Radio [11] Previous Next Select All Unselect All

#	Callsign	Licensee	status	Result	Latitude	Longitude	Elevation	Antenna N
1	Quevillon				49° 03' 29.41" N	76° 58' 45.77" W		
2	Matagami				49° 45' 26.75" N	77° 37' 34.43" W		
3	IRT Munich				48° 11' 12.98" N	11° 37' 46.99" E		
4	Peak				48° 46' 01.74" N	77° 22' 13.76" W		
5	Regensburg				48° 59' 40.99" N	12° 04' 37.99" E		
6	Test Tx				16° 06' 00.00" N	96° 36' 00.00" E		
7	NAVTEX	Myeik			12° 25' 34.00" N	98° 35' 57.00" E		SC225M-(CGI
8	NAVTEX	Kyauk Phyu			19° 17' 02.00" N	93° 31' 33.00" E		SC225M-(CGI
9	NAVTEX	Yangon			16° 42' 39.00" N	96° 17' 17.00" E		SC225M-(CGI
10	ss01				16° 53' 01.10" N	96° 13' 31.70" E		
11					16° 46' 59.40" N	96° 14' 08.50" E		

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 **Spectrum-E**

HomeDatastoreNetworkMap

default

> Network Management

Add/View/Edit Object

Modify Selected Objects

Delete Selected Objects

Delete All Objects

Map Selected Object

Convert Selected Objects

Check Google Map

Generate Report

Antennas

Calculators

ERP Calculator

Safe Harbor Calculator

Open Sensor

Import FCC ULS LM-Priv Assi...

Import TAFL Assignments

Frequency Plan Validation

Manage Frequency Plans

Distance to Border

Adjust UTX and Datt...

Object Type: Tx/Rx Radio [11] Previous Next Select All Unselect All

#	Callsign	Licensee	status	Result	Latitude	Longitude	Elevation	Antenna N
1	Quevillon				49° 03' 29.41" N	76° 58' 45.77" W		
2	Matagami				49° 45' 26.75" N	77° 37' 34.43" W		
3	IRT Munich				48° 11' 12.98" N	11° 37' 46.99" E		
4	Peak				48° 46' 01.74" N	77° 22' 13.76" W		
5	Regensburg				48° 59' 40.99" N	12° 04' 37.99" E		
6	Test Tx				16° 06' 00.00" N	96° 36' 00.00" E		
7	NAVTEX	Myeik			12° 25' 34.00" N	98° 35' 57.00" E		SC225M-(CGI
8	NAVTEX	Kyauk Phyu			19° 17' 02.00" N	93° 31' 33.00" E		SC225M-(CGI
9	NAVTEX	Yangon			16° 42' 39.00" N	96° 17' 17.00" E		SC225M-(CGI
10	ss01				16° 53' 01.10" N	96° 13' 31.70" E		
11					16° 46' 59.40" N	96° 14' 08.50" E		

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Spectrum-E

Home

Datastore

Network

Map

default

Network Management

Distance to Border

Adjust HTx and Pattern

Update Elevation

Update Distance

Batch calculate HAAT

Calculate DHAAT

Generate Custom Contours

Generate R6406 Interference ...

Generate R6406 LMCC Derat...

Calculate Intermod

Clear Contours

Path Profile - ITM-1.2.2

Path Profile - ITU-R P.452

Path Profile - ITU-R P.1812

Calculate Longley-Rice Path L...

Calculate O-H-D Path Loss

ITU-R P.525 LOS Coverage

Run ITU-R P.525/526 PL Matrix

Run ITU-R P.1812 Path Loss ...

Object Type: Tx/Rx Radio [11]

Previous

Next

Select All

Unselect All

#	Callsign	Licensee	status	Result	Latitude	Longitude	Elevation	Antenna N
1	Quevillon				49° 03' 29.41" N	76° 58' 45.77" W		
2	Matagami				49° 45' 26.75" N	77° 37' 34.43" W		
3	IRT Munich				48° 11' 12.98" N	11° 37' 46.99" E		
4	Peak				48° 46' 01.74" N	77° 22' 13.76" W		
5	Regensburg				48° 59' 40.99" N	12° 04' 37.99" E		
6	Test Tx				16° 06' 00.00" N	96° 36' 00.00" E		
7	NAVTEX	Myeik			12° 25' 34.00" N	98° 35' 57.00" E		SC225M-(CGI
8	NAVTEX	Kyauk Phyu			19° 17' 02.00" N	93° 31' 33.00" E		SC225M-(CGI
9	NAVTEX	Yangon			16° 42' 39.00" N	96° 17' 17.00" E		SC225M-(CGI
10	ss01				16° 53' 01.10" N	96° 13' 31.70" E		
11					16° 46' 59.40" N	96° 14' 08.50" E		

Spectrum-E

Home

Datastore

Network

Map

default

Network Management

Run ITU-R P.1546 Path Loss ...

Run ITU-R P.452 Path Loss

Run ITU-R P.528 Path Loss

Calculate 3GPP-LTE Path Los...

Calculate Radar Path Loss Ma...

dBm Talk Out Power Received

dBu Talk Out FS Received

dBm Talk In Power Received

Power Flux Density

Downlink Overlap

Downlink Overlap Count

dBm Talk Out Best Server

Custom C/I Map

Calculate TSB-88.C SARD

Downlink Simulcast

Prediction to SHP

Create Contour from Coverage

Covered Polygons

Rasterize Shapefile

Export to GoogleEarth

Object Type: Tx/Rx Radio [11]

Previous




Next

Select All

Unselect All

#	Callsign	Licensee	status	Result	Latitude	Longitude	Elevation	Antenna N
1	Quevillon				49° 03' 29.41" N	76° 58' 45.77" W		
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8	NAVTEX	Kyauk Phyu			19° 17' 02.00" N	93° 31' 33.00" E		SC225M-(CGI
9	NAVTEX	Yangon			16° 42' 39.00" N	96° 17' 17.00" E		SC225M-(CGI
10	ss01				16° 53' 01.10" N	96° 13' 31.70" E		
11					16° 46' 59.40" N	96° 14' 08.50" E		

11. Prediction

 Spectrum-E Home Datastore Network Map default  




Current Prediction

Unselect Rename

Existing Predictions


last modified	name	action
Dec 11 2020 15:36:23	DL_dbu_Composite_dbu	archive delete
Dec 11 2020 15:36:09	DL_dbm_Composite_dbm	archive delete
Dec 11 2020 15:35:56	UL_Composite_dbm	archive delete
Oct 28 2020 11:17:40	DL_Matagami_1812_dbm	archive delete
Oct 28 2020 11:17:13	DL_Matagami_1546_dbm	archive delete
Oct 28 2020 08:07:09	DL_dbm_Matagami_1546_dbm	archive delete
Oct 28 2020 08:04:41	DL_dbm_Matagami_dbm	archive delete
Oct 23 2020 15:02:15	DL_Overlap_dot	archive delete
Oct 09 2020 11:11:16	DL_dbm_1812_dbm	archive delete
Oct 09 2020 09:24:15	DL_dbm_1812_comit_dbm	archive delete
Oct 05 2020 21:44:26	itu412_dot	archive delete
Oct 02 2020 15:34:12	cimap_rgb	archive delete
Oct 02 2020 14:29:26	XZK_dbu	archive delete
Jul 28 2020 10:19:16	DL_Overlap_rgb	archive delete
Jul 21 2020 15:48:46	DL_dbu_Composite3_dbu	archive delete
Jul 21 2020 15:42:02	ok_dbu	archive delete
Jul 21 2020 13:21:17	HF_Composite_snr	archive delete



























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 Spectrum-E Home Datastore Network Map default  

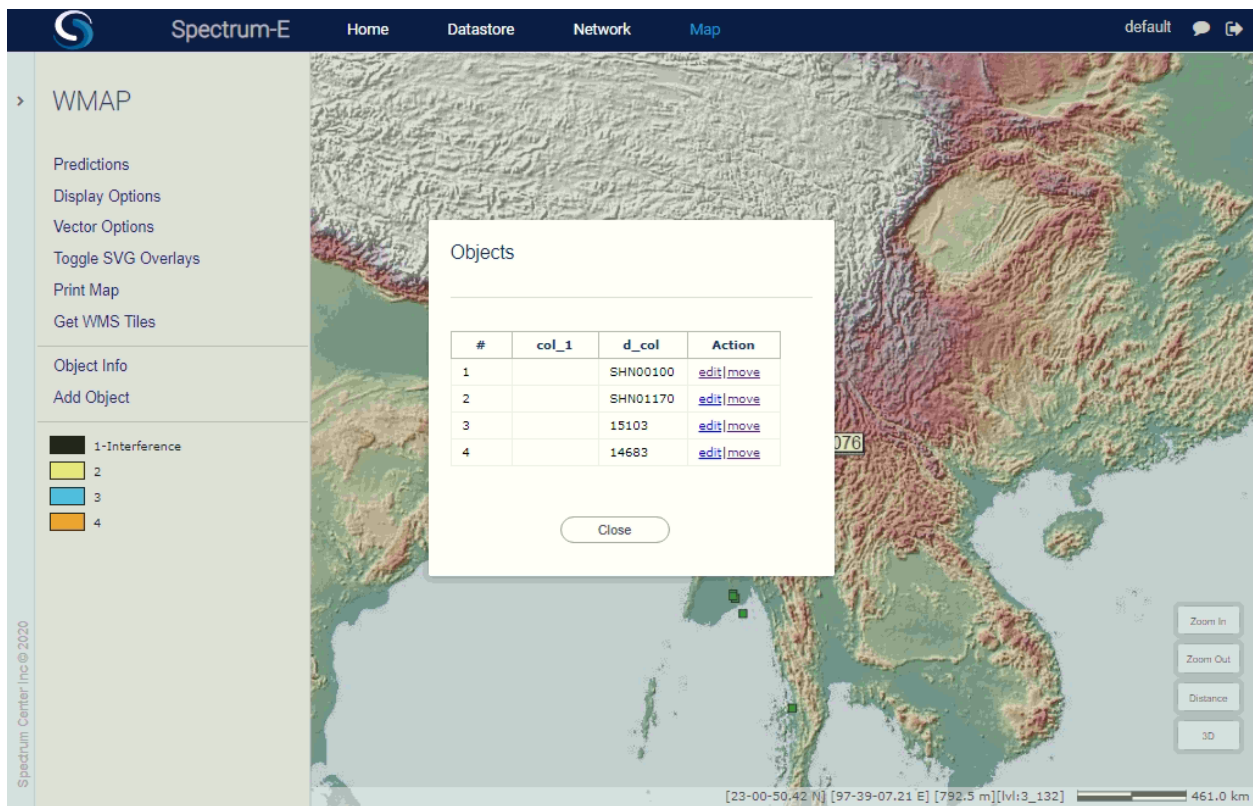
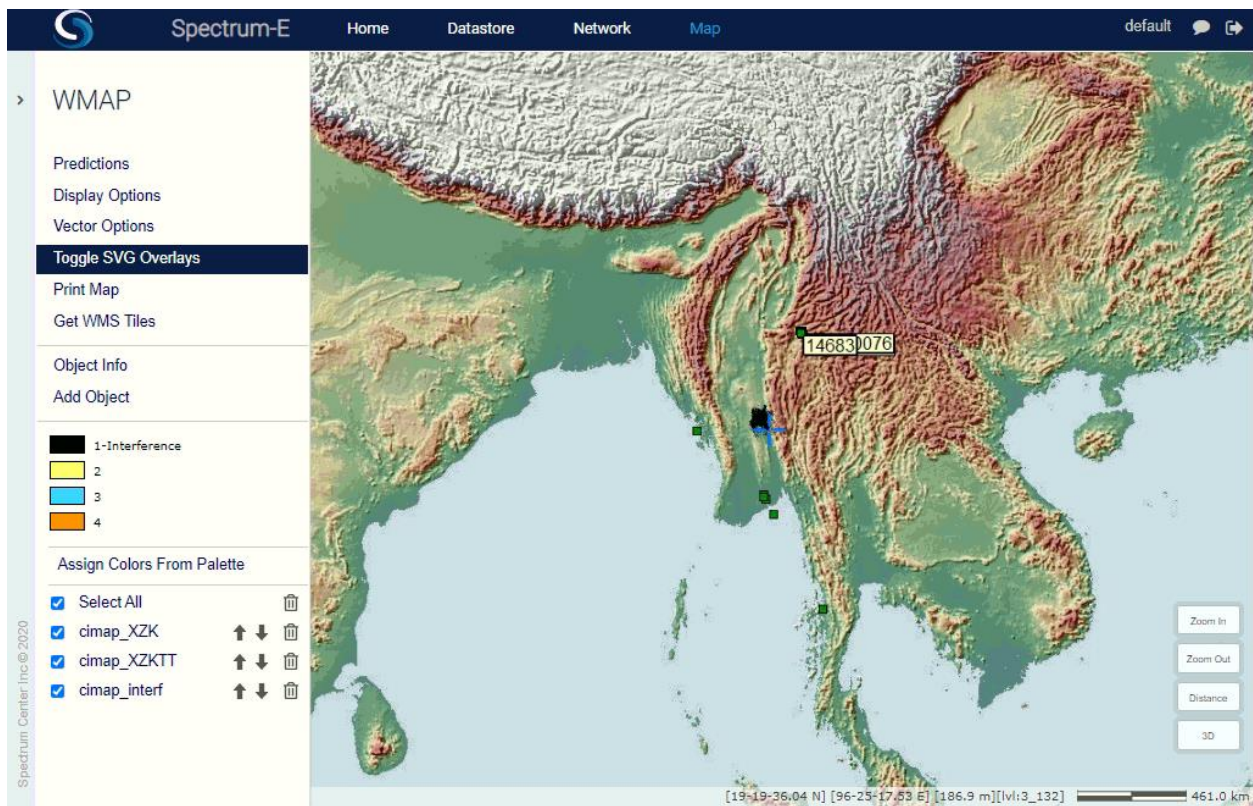
Display Options

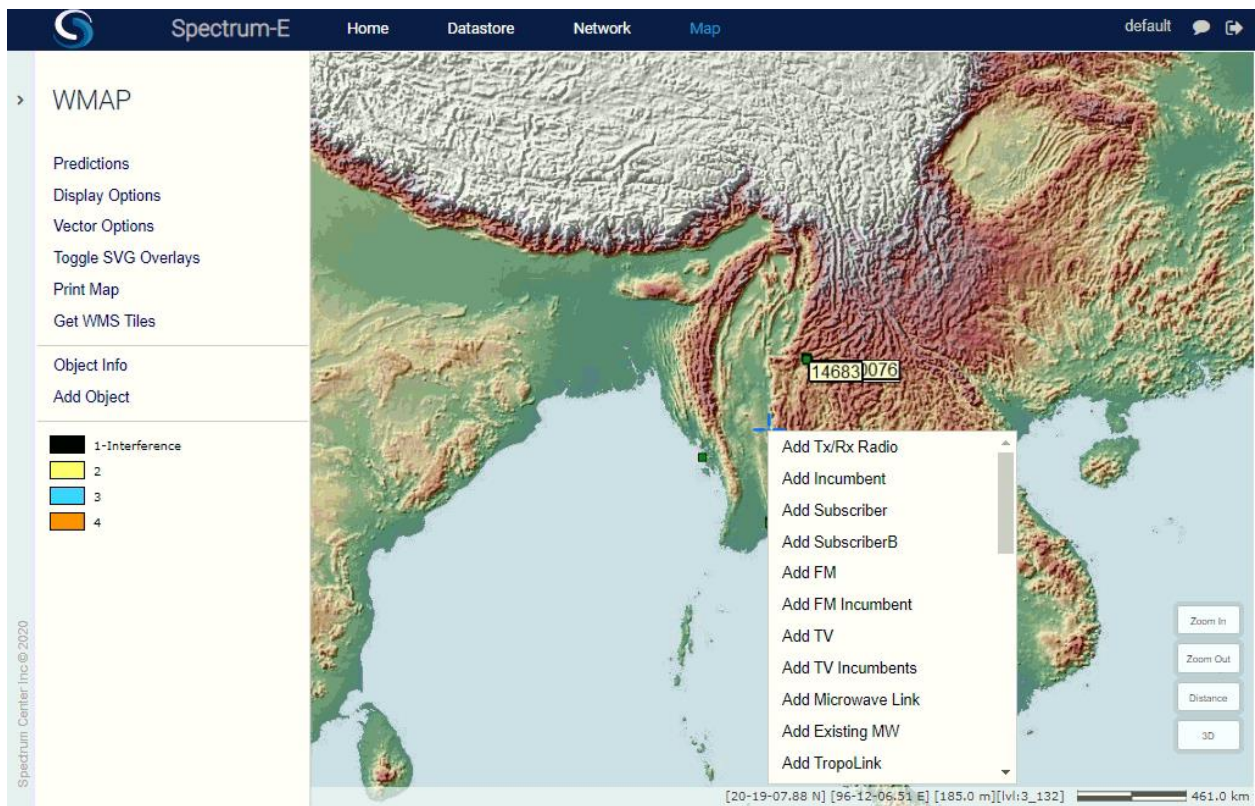
Update

Param	Value
Background:	Terrain 
Label Font Size:	18

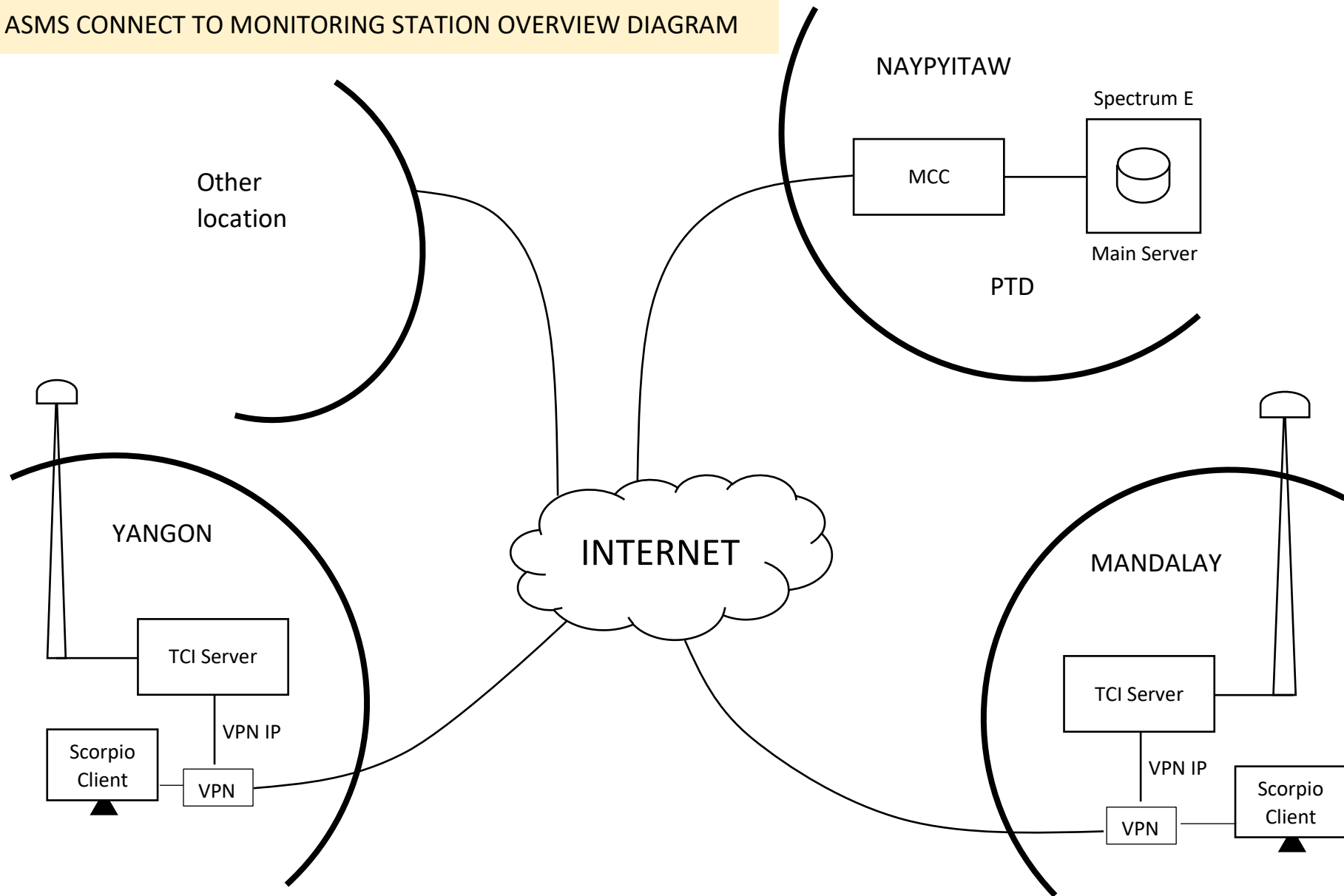
Object	Display	Color	Width	Label
Tx/Rx Radio	<input checked="" type="checkbox"/>		4	
Incumbent	<input type="checkbox"/>		4	
Subscriber	<input checked="" type="checkbox"/>		4	
SubscriberB	<input checked="" type="checkbox"/>		2	
FM	<input type="checkbox"/>		5	
FM Incumbent	<input type="checkbox"/>		5	
TV	<input type="checkbox"/>		4	
TV Incumbents	<input type="checkbox"/>		4	
Microwave Link	<input checked="" type="checkbox"/>		4	site_a 
Existing MW	<input checked="" type="checkbox"/>		4	frequency_a 
TropoLink	<input type="checkbox"/>		2	id_a 
Measurement	<input checked="" type="checkbox"/>		2	meas_id 
MeasurementB	<input type="checkbox"/>		2	meas_id 

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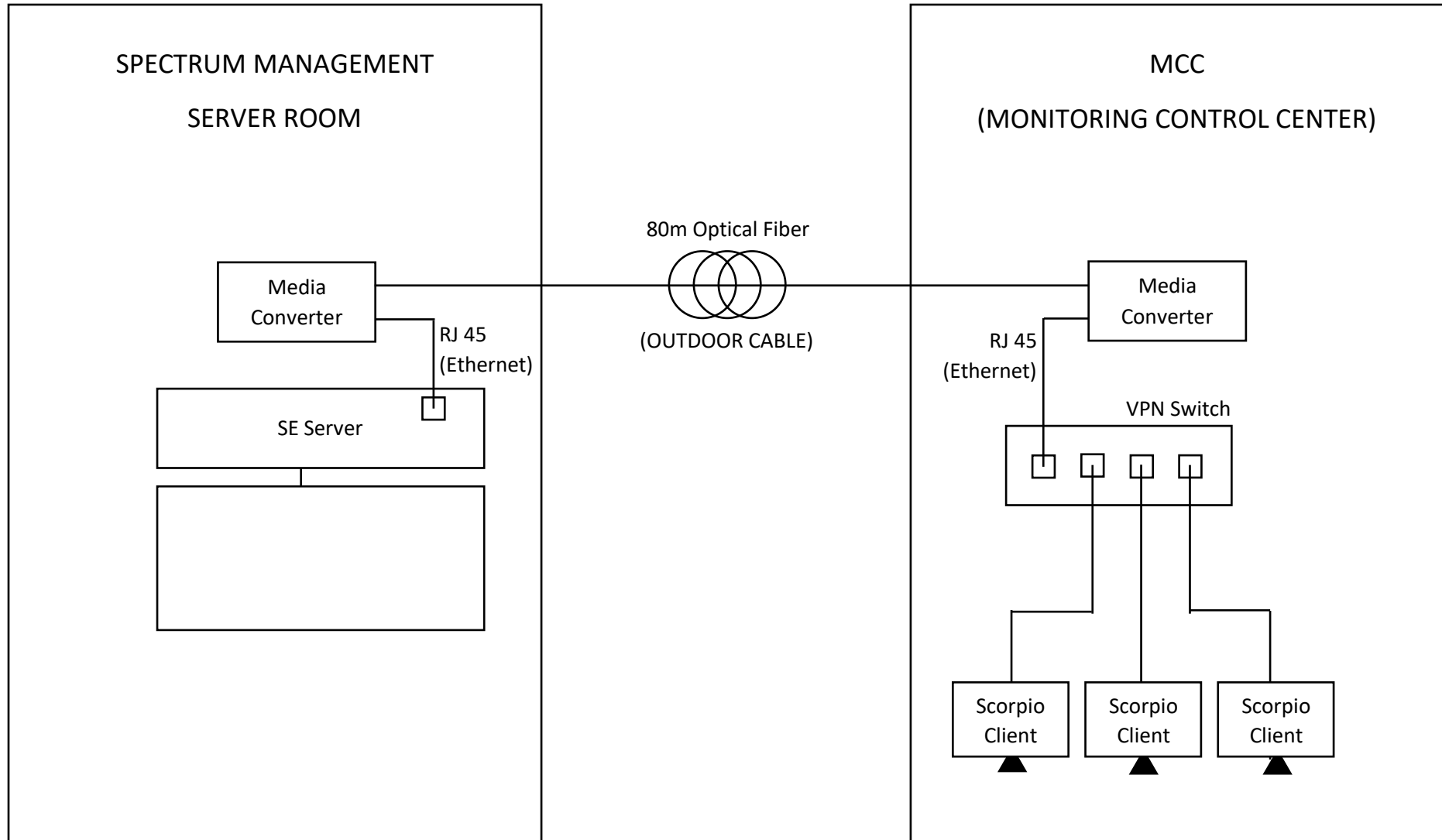




ASMS CONNECT TO MONITORING STATION OVERVIEW DIAGRAM

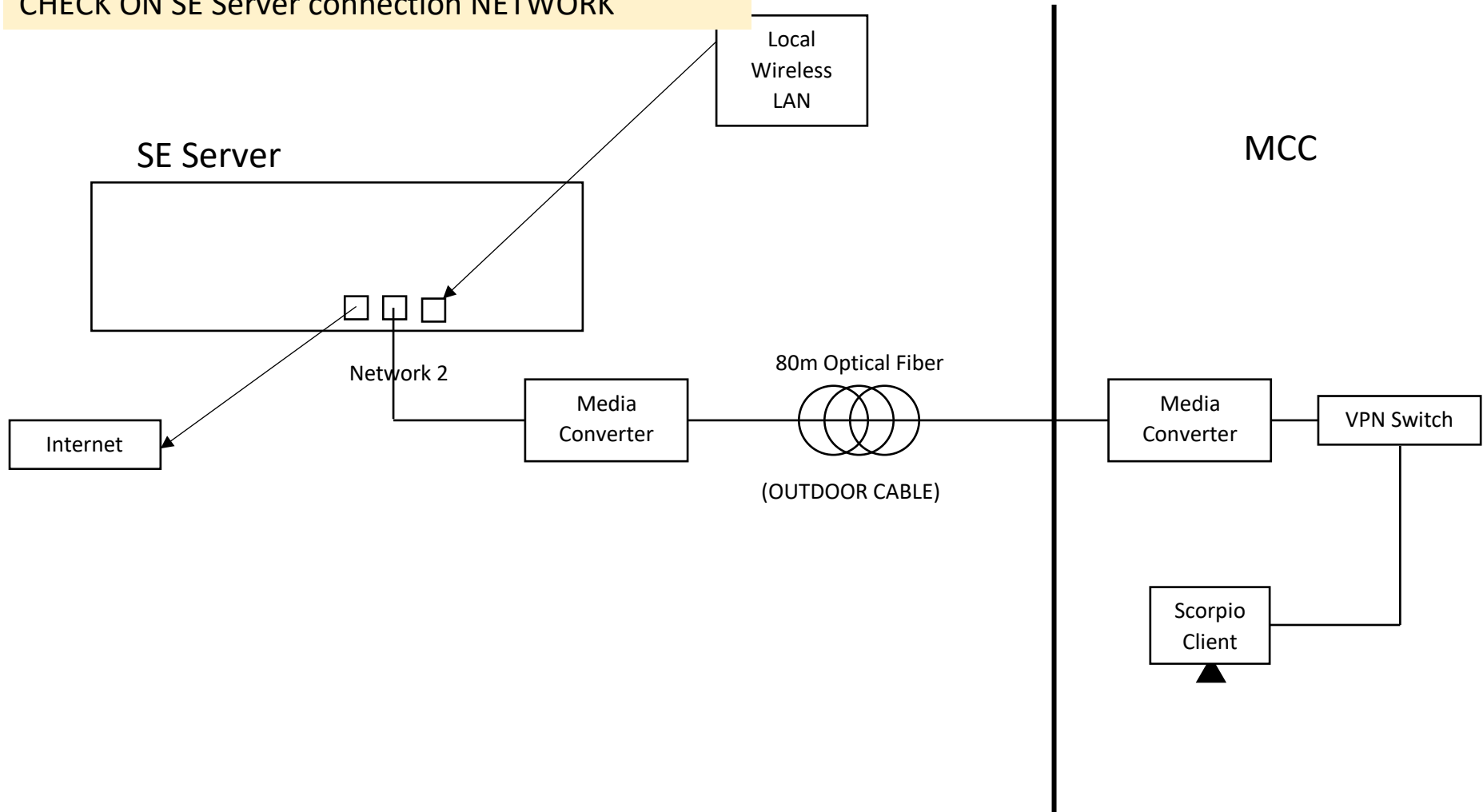


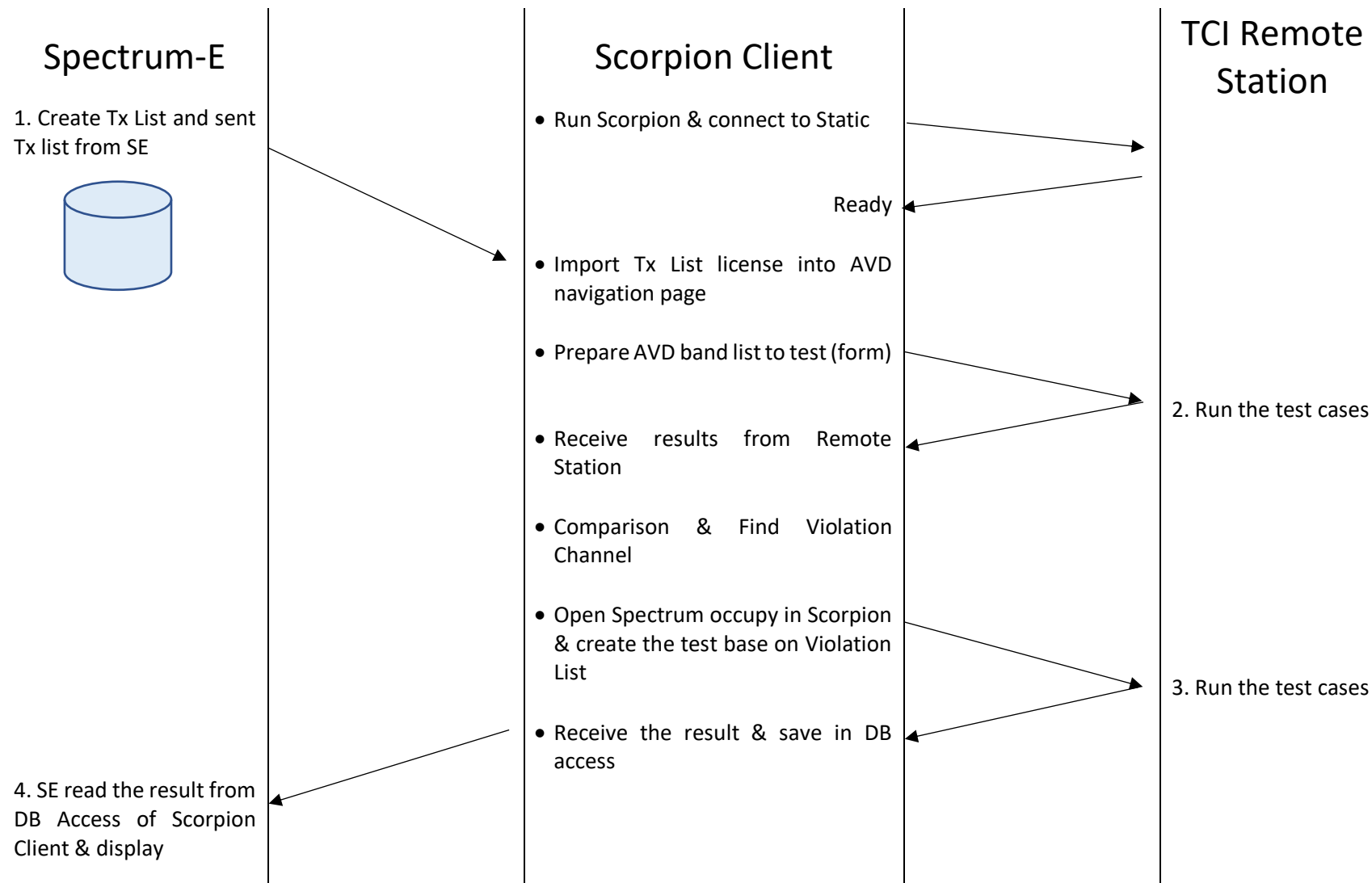
NAYPYITAW PTD OFFICE



FOR REMOTE CONNECTING TO MONITORING STATION

CHECK ON SE Server connection NETWORK





SPECTRUM-E – SCORPIO CLIENT – TCI REMOTE STATIONS PROTOCOL

Remote Monitoring Module User Guide

1. Send Tx List (in Spectrum-E)

Step 1: To send transmitter list to the Scorpio Client folder, click on “Send Tx List”.

The screenshot shows the Spectrum-E web interface. The top navigation bar includes 'Home', 'Datastore', 'Network', and 'Map'. The left sidebar, under the 'Datastore' section, lists several options: 'TCI', 'Results', 'Toggle List/Block View', 'Add/view/Edit Order', 'Delete Selected Order(s)', 'Send Tx List' (highlighted with a red box), 'Occupancy Results', 'Import CSV Result', 'Settings', and 'Map'. The main content area is titled 'TCI' and displays a table with 6 records. The table has columns for '#', 'uid', 'state', 'alerts', 'result', 'usr', 'service_type', and 'date_start'. The data rows show various UIDs in the 'TCIO' state with 'Open' alerts and 'No' results, managed by 'admin' or 'Admin' users.

#	uid	state	alerts	result	usr	service_type	date_start
1	5f173790b1b56	TCIO	Open	No	admin		
2	5f1737df19330	TCIO	Open	No	admin		
3	5fb8a7ffdc575	TCIO	Open	No	Admin		
4	5fbc30ee228ba	TCIO	Open	No	Admin		
5	5fbd354c04012	TCIO	Open	No	Admin		
6	5fbd51a0f40b0	TCIO	Open	No	Admin		

Step 2: User can click “View TX List” to preview the current transmitter list.

Spectrum-EHomeDatastoreNetworkMapdefault

Scorpio Monitoring System

Measurements Management

Measurement Campaign

Date

25/11/2020

Description

Mode

Transmitter List Scan

Transmitter List

View TX List

Please create a transmitter list [here](#)

SubmitClose

The screenshot below shows the Tx list preview page.

Spectrum-EHomeDatastoreNetworkMapdefault

Scorpio Monitoring System

Measurements Management

SCORPIO Transmitter List:

FrequencyID	LicenseNumber	LicenseType	ReferenceNumber	FrequencyDeviation	Frequency*	Band	Bandwidth*	CI
0					156800000		11200	0

Close

Step 3: If there is no transmitter list or user wants to create a new list, click the button that is marked red in the screenshot below. It will take the user to the Network page in Spectrum-E.

Spectrum-E Home Datastore Network Map default

Scorpio Monitoring System

Measurements Management

Measurement Campaign

Date: 25/11/2020

Description:

Mode: Transmitter List Scan

Transmitter List: View TX List

Please create a transmitter list [here](#)

Submit Close

Spectrum Center Inc © 2020

Step 4: User can create new Tx/Rx Radio objects or use existing objects. Next, select the objects that the user wants to put inside the transmitter list, and then click “Scorpio-Export Tx List” on the left-side menu bar.

Step 6: User can check the newly created Tx list by following [Step 2](#). If it's good, user can click Submit.

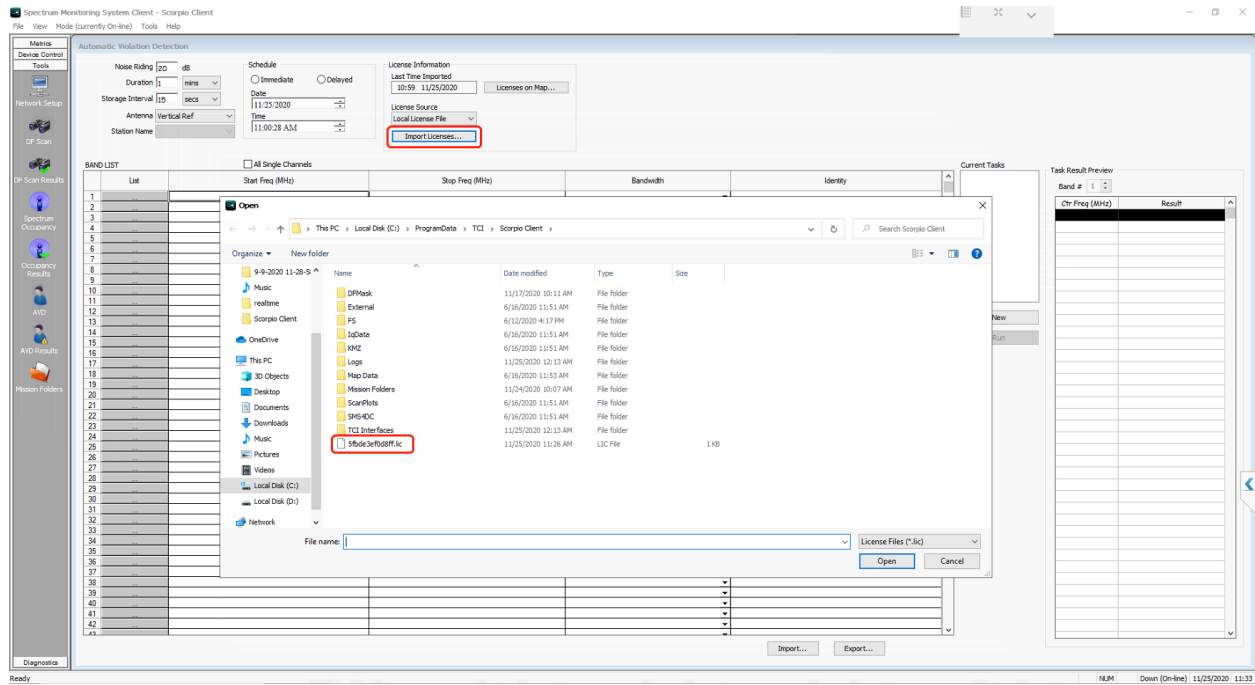
The screenshot shows the 'Scorpio Monitoring System' interface. At the top is a navigation bar with 'Spectrum-E', 'Home', 'Datastore', 'Network', and 'Map'. Below this is the 'Measurements Management' section. It contains a 'Measurement Campaign' form with fields for 'Date' (set to 25/11/2020), 'Description', 'Mode' (set to 'Transmitter List Scan'), and 'Transmitter List' (with a 'View TX List' button). A 'Submit' button is highlighted with a red box. A 'Close' button is also present. A link 'here' is provided for creating a transmitter list. The footer on the left reads 'Spectrum Center Inc © 2020'.

If the Tx list is successfully sent to the Scorpio Client folder, it will go back to the monitoring datastore and a new row of record is added to the table suggesting the "Send Tx List" task is performed.

The screenshot shows the 'Datastore' section of the interface. On the left is a sidebar with options: 'Toggle List/Block View', 'Add/view/Edit Order', 'Delete Selected Order(s)', 'Send Tx List', 'Occupancy Results', 'Import CSV Result', 'Settings', and 'Map'. The main area displays a table titled 'TCI' with 7 records. The last record is highlighted with a red box. The table has columns: '#', 'uid', 'state', 'alerts', 'result', 'usr', 'service_type', and 'date_start'.

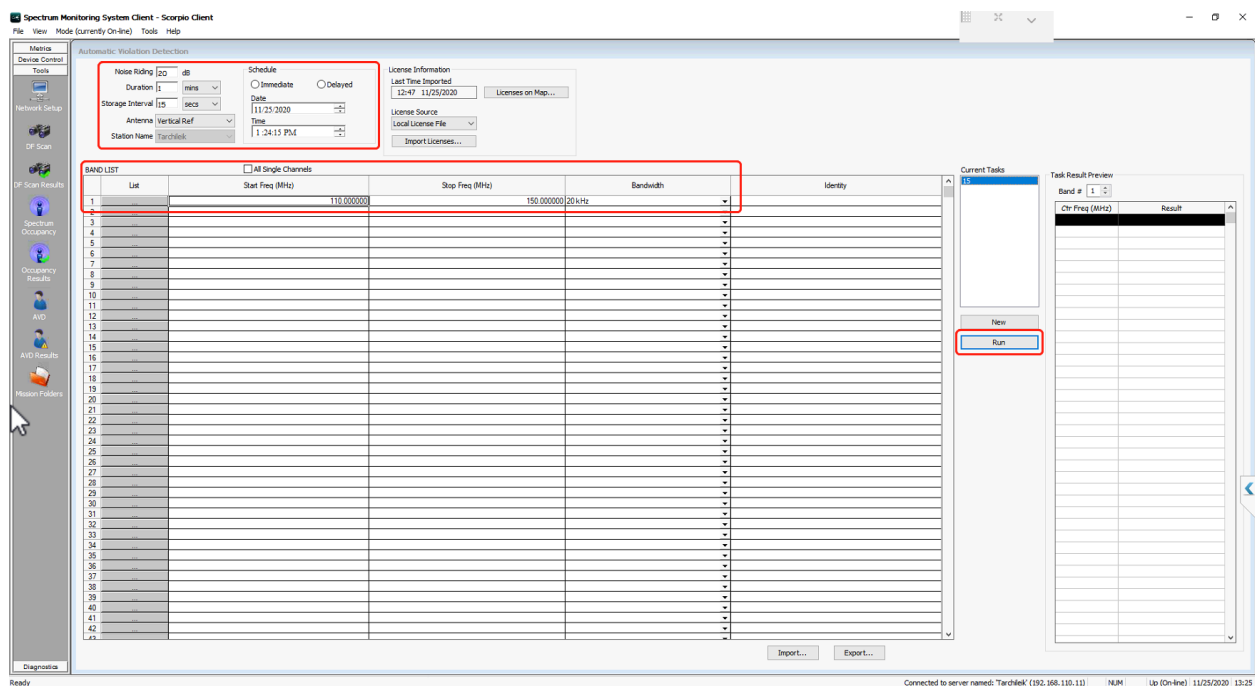
#	uid	state	alerts	result	usr	service_type	date_start
1	5f173790b1b56	TC10	Open	No	admin		
2	5f1737df19330	TC10	Open	No	admin		
3	5fb8a7ffdc575	TC10	Open	No	Admin		
4	5fbc30ee228ba	TC10	Open	No	Admin		
5	5fbd354c04012	TC10	Open	No	Admin		
6	5fbd51a0f40b0	TC10	Open	No	Admin		
7	5fbde3ef0d8ff	TC10	Open	No	Admin		

Step 7: In the Scorpio Client PC, user can find the .lic file in the Scorpio Client folder (C:\ProgramData\TCI\Scorpio Client) and import it to the Scorpio Client AVD window.

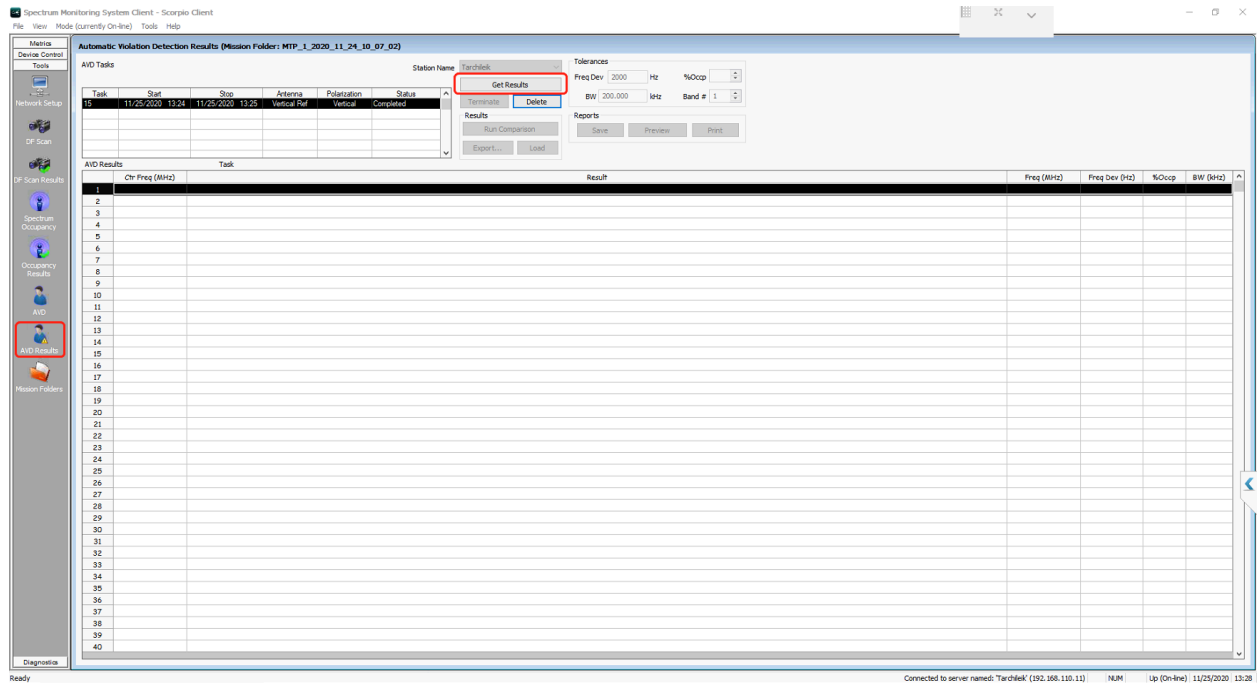


2. Run AVD analysis (in Scorpio Client)

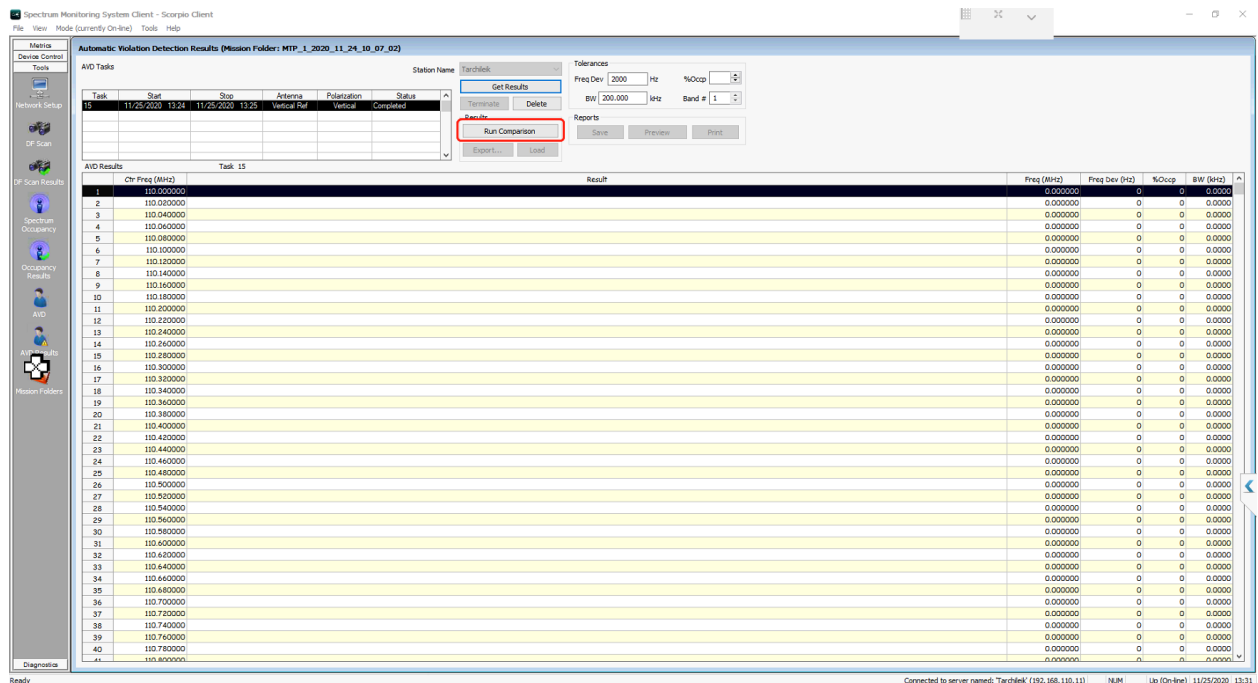
Step 1: After importing the .lic file, user can change settings at the top, input Start Freq, Stop Freq and Bandwidth information in the "BAND LIST" table and click "Run".



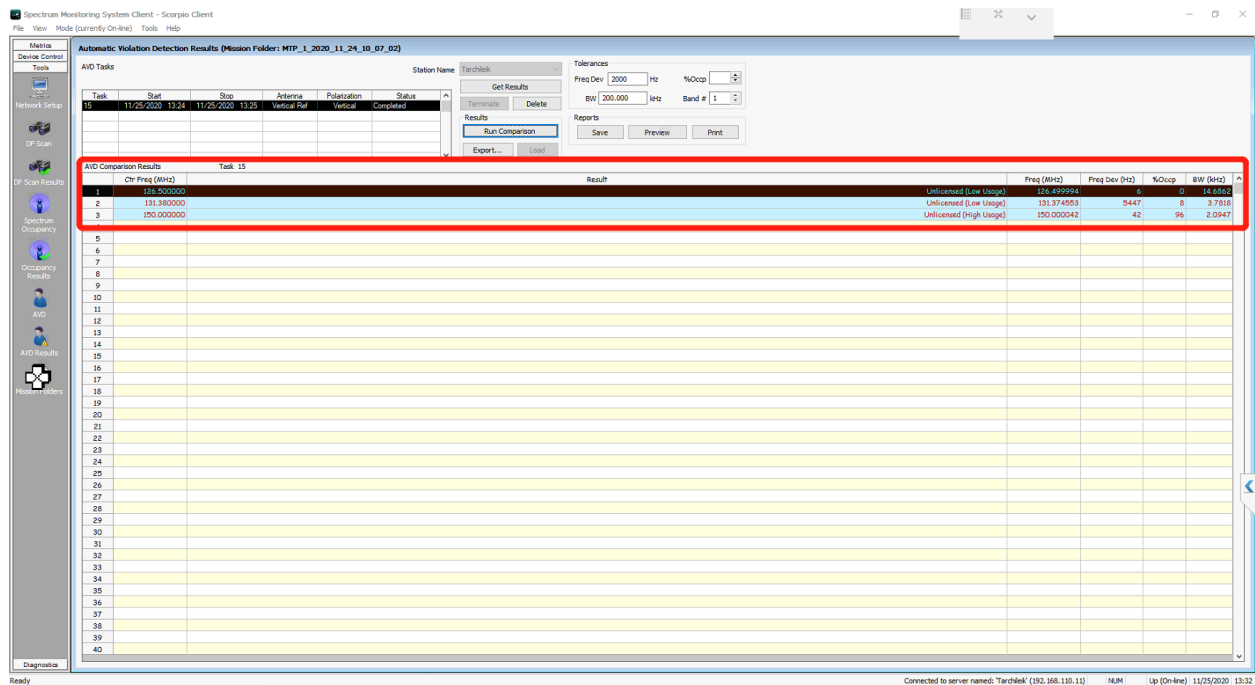
Step 2: Then the user can go to “AVD Results”. If the task is completed, user can click “Get Results” button to get analysis results.



After results are shown, the “Run Comparison” button becomes available.

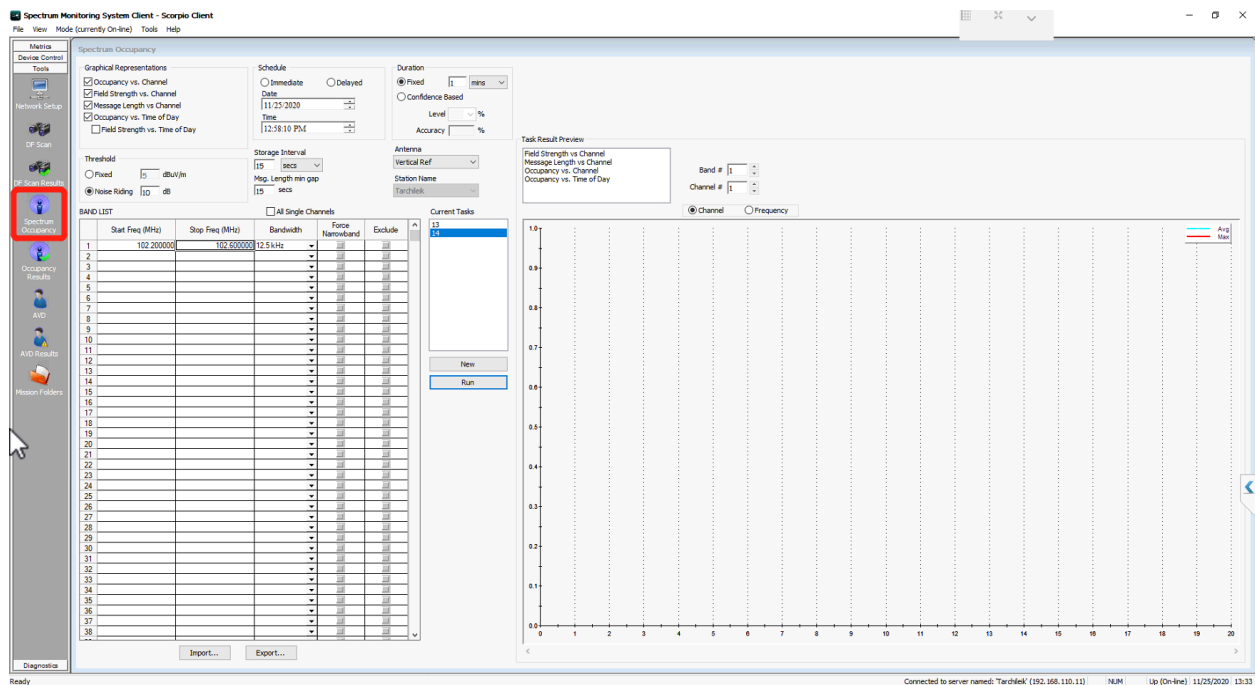


Step 3: Click the “Run Comparison” button to view comparison results.

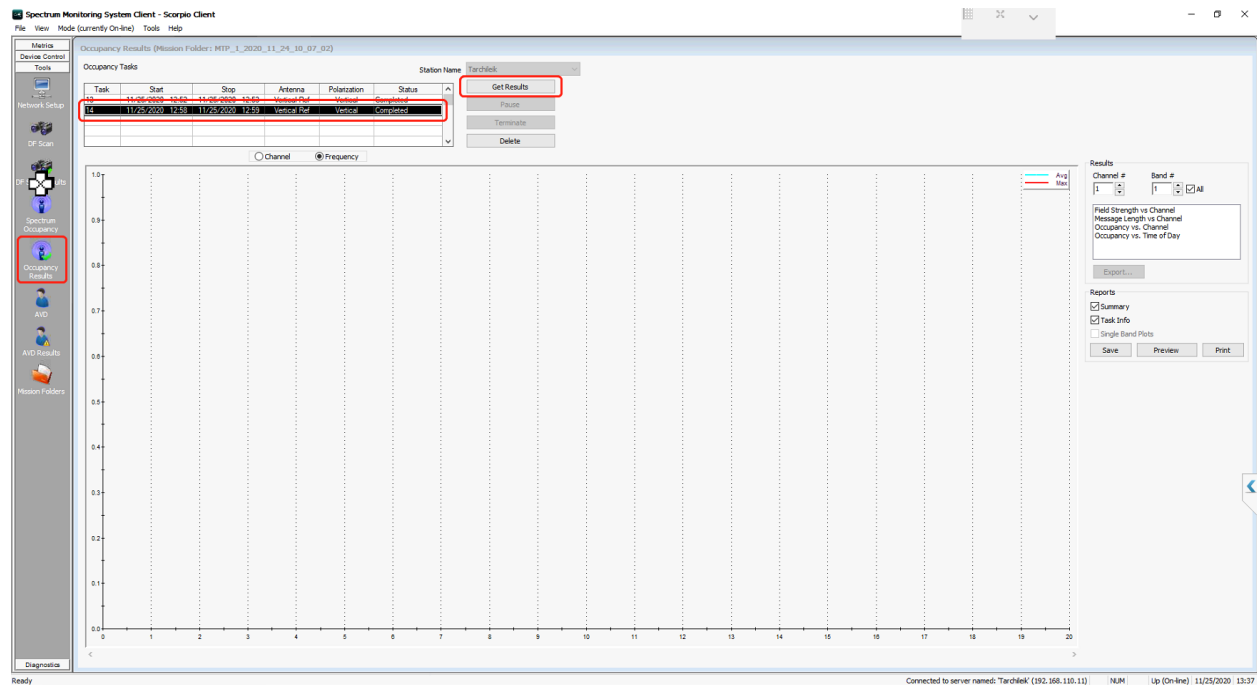


3. Run Occupancy analysis (in Scorpio Client)

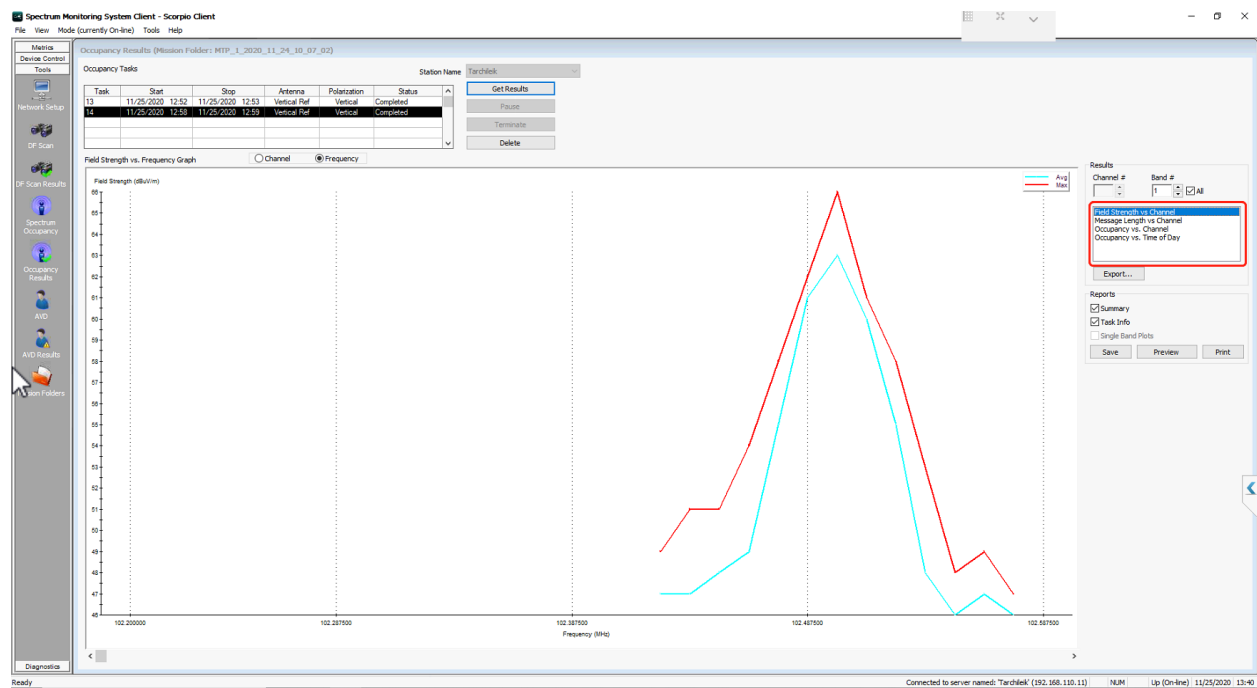
Step 1: Go to “Spectrum Occupancy” to run Occupancy analysis, user can change settings, input Start Freq, Stop Freq and Bandwidth information in the “BAND LIST” table and click “Run”.



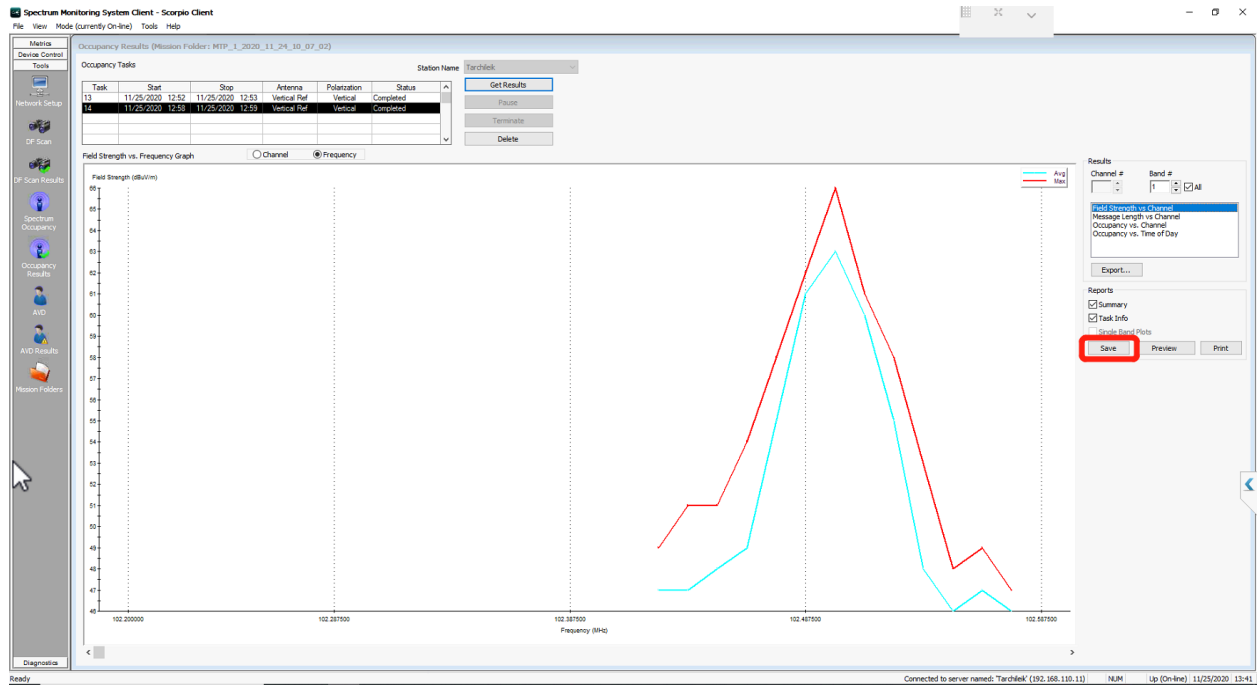
Step 2: User can go to “Occupancy Results”. After a task is completed, user can click on a completed task in the task list at the top and click “Get Results”.



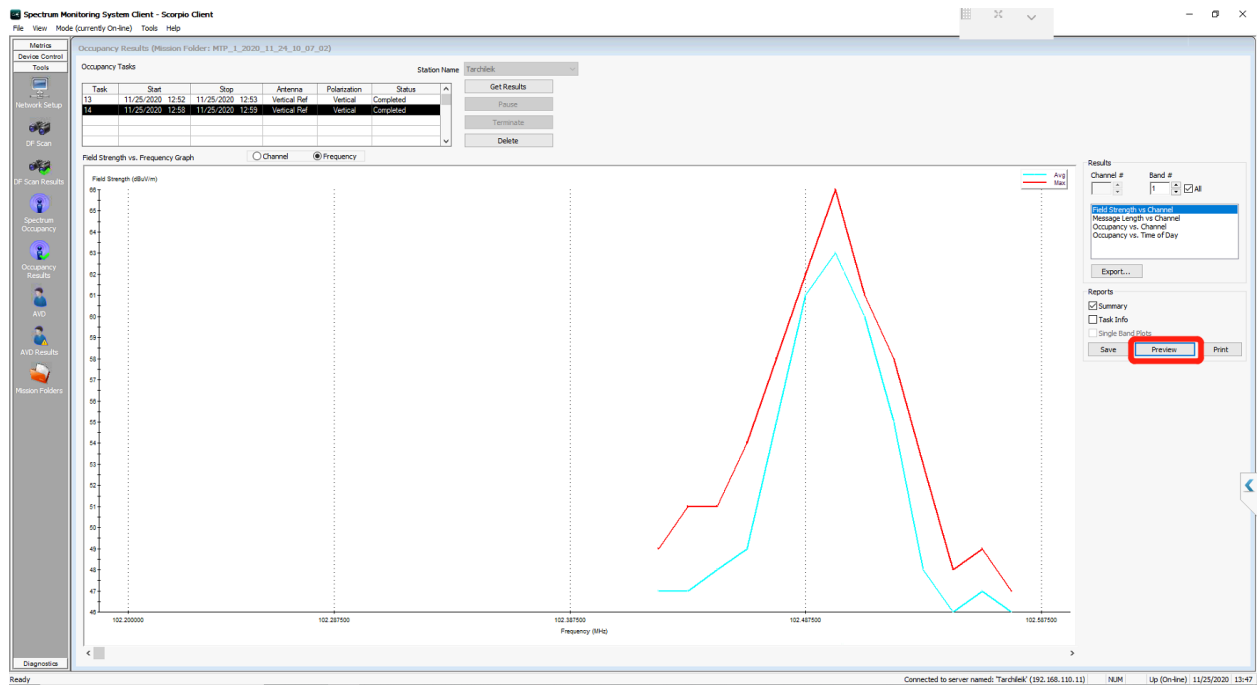
Step 3: Then user can select the type of result graph to view in the selection box marked red in the screenshot below.



Step 4: Click the “Save” button to save results as reports in PDF.

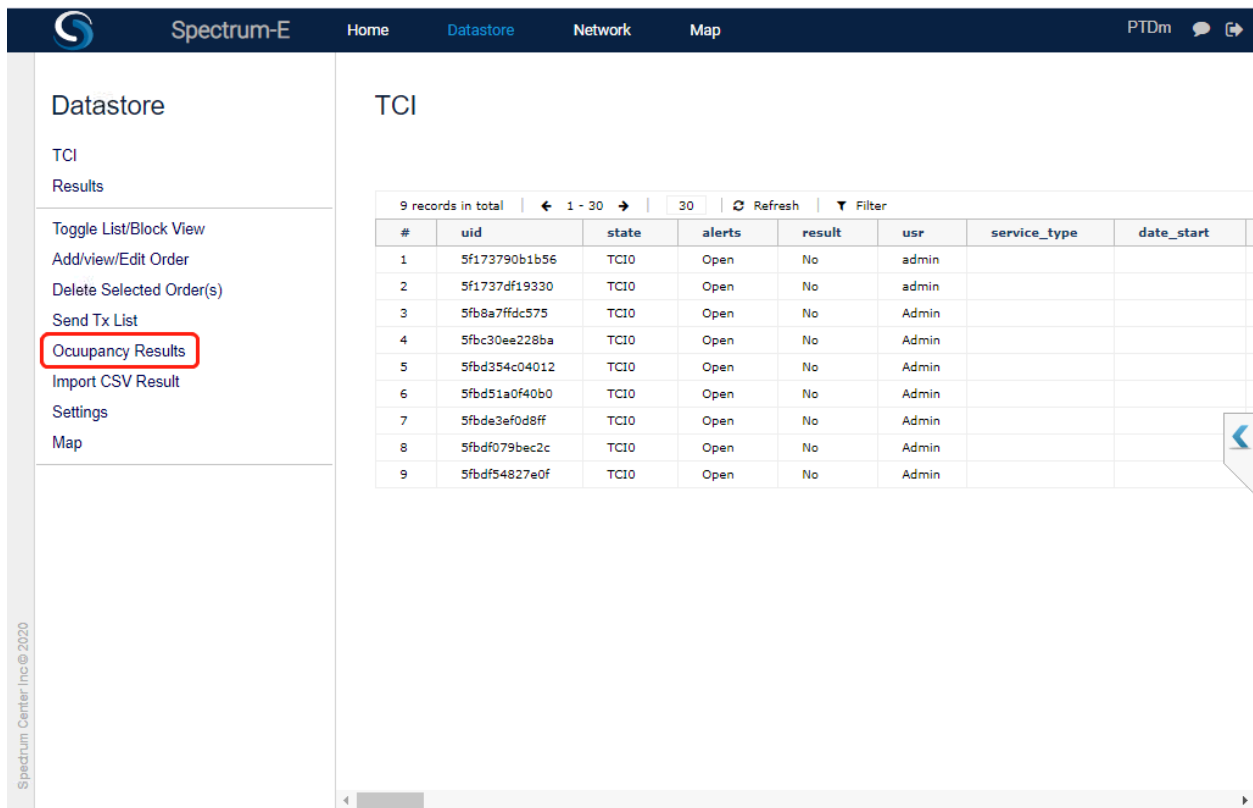


User can also preview reports by clicking the “Preview” button.



4. View Occupancy Results (in Spectrum-E)

Step 1: In the Remote Monitoring datastore, click “Occupancy Results” on the left menu bar.

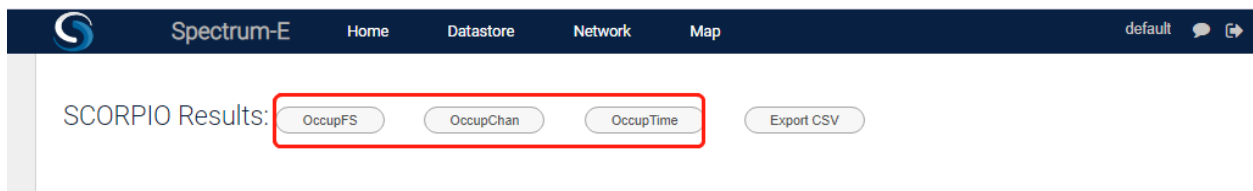


The screenshot shows the Spectrum-E interface. The left sidebar has a 'Datastore' section with 'TCI Results' selected. Under 'Results', the 'Occupancy Results' option is highlighted with a red box. The main content area is titled 'TCI' and displays a table with 9 records. The table has columns: #, uid, state, alerts, result, usr, service_type, and date_start. The records are as follows:

#	uid	state	alerts	result	usr	service_type	date_start
1	5f173790b1b56	TC10	Open	No	admin		
2	5f1737df19330	TC10	Open	No	admin		
3	5fb8a7ffdc575	TC10	Open	No	Admin		
4	5fbc30ee228ba	TC10	Open	No	Admin		
5	5fbd354c04012	TC10	Open	No	Admin		
6	5fbd51a0f40b0	TC10	Open	No	Admin		
7	5fbde3ef0d8ff	TC10	Open	No	Admin		
8	5fbdf079bec2c	TC10	Open	No	Admin		
9	5fbdf54827e0f	TC10	Open	No	Admin		

Step 2: The user will be shown a page with three buttons for each type of result from the analyses ran above:

- Field Strength (occupFS)
- Channel Occupancy (OccupChan)
- Time Occupancy (OccupTime)



The screenshot shows the Spectrum-E interface. The left sidebar has a 'Datastore' section with 'TCI Results' selected. The main content area is titled 'SCORPIO Results:'. Below the title, there are three buttons: 'OccupFS', 'OccupChan', and 'OccupTime'. The 'OccupFS' button is highlighted with a red box. To the right of these buttons is an 'Export CSV' button.

User can click on any of these 3 buttons to view results. An example is shown below. To customize the results, the user can export results to CSV file pressing the “Export CSV” button.



SCORPIO Results:

OccupFS

OccupChan

OccupTime

Export CSV

ClientTaskId	Channel	Frequency	FSMax	FSAvg
14	1	102.2	0	0
14	2	102.2125	0	0
14	3	102.225	0	0
14	4	102.2375	0	0
14	5	102.25	0	0
14	6	102.2625	0	0
14	7	102.275	0	0
14	8	102.2875	0	0
14	9	102.3	0	0
14	10	102.3125	0	0
14	11	102.325	0	0
14	12	102.3375	0	0
14	13	102.35	0	0
14	14	102.3625	0	0
14	15	102.375	0	0
14	16	102.3875	0	0
14	17	102.4	0	0
14	18	102.4125	0	0
14	19	102.425	49	47
14	20	102.4375	51	47
14	21	102.45	51	48
14	22	102.4625	54	49
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