

RDKB Wi-Fi Spectrum Analyzer support in EMU - Design - 2020 M3

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Introduction

A WiFi spectrum analysis is the process of measuring the WiFi signal in a certain area and determining its strength. A WiFi spectrum analysis is typically performed to find interference that negatively impacts wireless performance and to eliminate it.

WiFi Spectrum Analyzer feature provides the real time metrics for the WiFi radio spectrum

TR-181 Data Model Parameter

Module	Data Model Parameters	Description
CcspWiFiAgent(TR181-WiFi-USGv2.XML)	1.Device.WiFi.NeighboringWiFiDiagnostic.Enable	shows wifi spectrum Analyzer feature was enabled or not
	2. Device.WiFi.NeighboringWiFiDiagnostic.DiagnosticsState	If it's enabled, trigger a request for spectrum Analyzer api's call
	3.Device.WiFi.NeighboringWiFiDiagnostic.ResultNumberOfEntries Index value will be based on ResultNumberOfEntries Device.WiFi.NeighboringWiFiDiagnostic.Result.index.	This parameter contains all the resultant information of wifi metrics data's .

Design Considerations

1. Integrated wifi-spectrum analyzer php , ajax files to view the UI page in Browser.
2. Newly added php and ajax files are wifi_spectrum_analyzer.php, spectrum_analyzer_download.php,at_saving.php, ajax_wifi_spectrum_analyzer.php,ajax_at_saving.php
3. Modified nav.php in include folder
4. Added Troubleshooting > Wi-Fi Spectrum Analyzer page in WebUI
5. Implemented wifi_getNeighboringWiFiDiagnosticResult2() api's in wifi hal layer

Architecture

