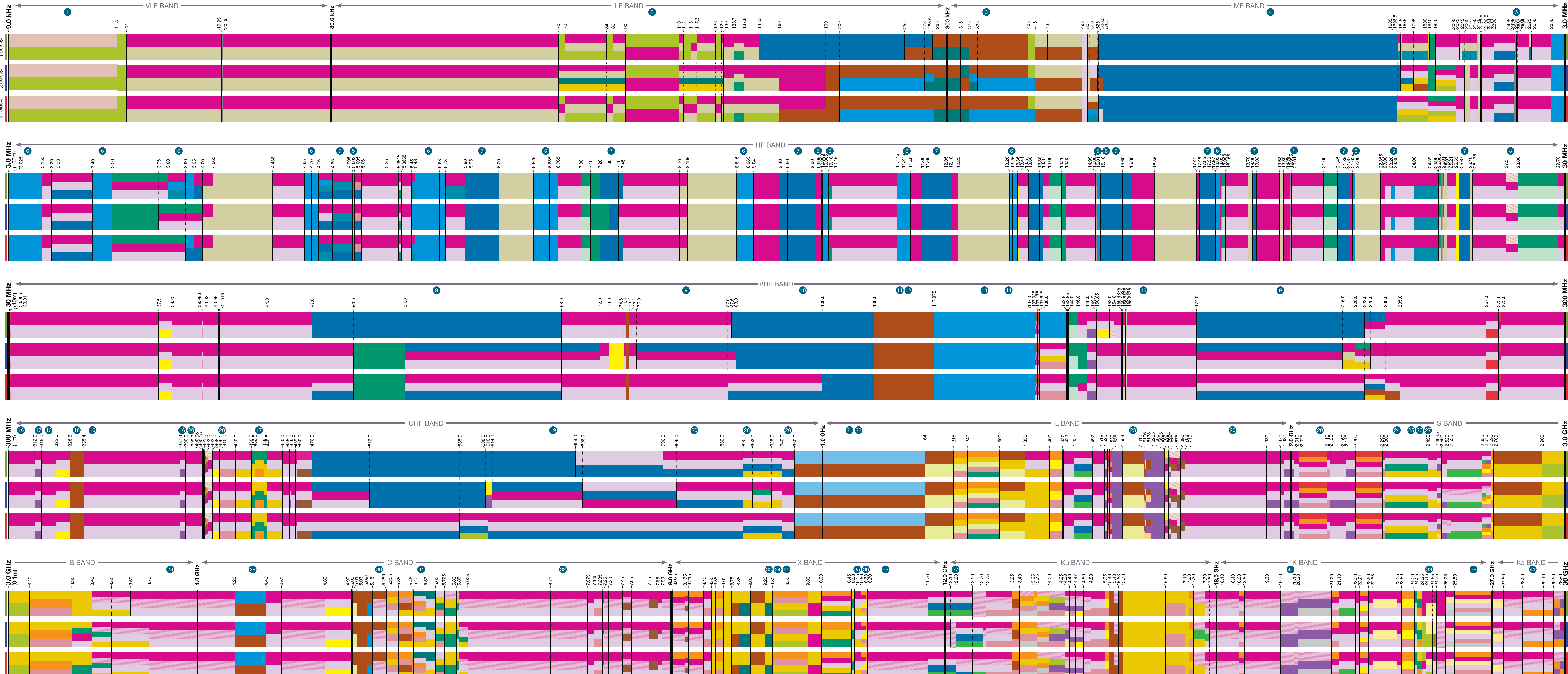


# Worldwide Spectrum Allocations (Courtesy of Tektronix)



<ul style="list-style-type: none"> <li><span style="color: blue;">■</span> Aeronautical Mobile</li> <li><span style="color: lightblue;">■</span> Aeronautical Mobile Satellite</li> <li><span style="color: brown;">■</span> Aeronautical Radionavigation</li> <li><span style="color: green;">■</span> Amateur</li> <li><span style="color: lightgreen;">■</span> Amateur Satellite</li> <li><span style="color: blue;">■</span> Broadcasting</li> <li><span style="color: green;">■</span> Broadcasting Satellite</li> <li><span style="color: orange;">■</span> Earth Exploration Satellite</li> </ul>	<ul style="list-style-type: none"> <li><span style="color: pink;">■</span> Fixed</li> <li><span style="color: lightpink;">■</span> Fixed Satellite</li> <li><span style="color: yellow;">■</span> Inter-Satellite</li> <li><span style="color: blue;">■</span> Land Mobile</li> <li><span style="color: lightblue;">■</span> Land Mobile Satellite</li> <li><span style="color: green;">■</span> Maritime Mobile</li> <li><span style="color: teal;">■</span> Maritime Mobile Satellite</li> <li><span style="color: darkgreen;">■</span> Maritime Radionavigation</li> </ul>	<ul style="list-style-type: none"> <li><span style="color: lightgreen;">■</span> Meteorological Aids</li> <li><span style="color: brown;">■</span> Meteorological Satellite</li> <li><span style="color: purple;">■</span> Mobile</li> <li><span style="color: red;">■</span> Mobile Satellite</li> <li><span style="color: yellow;">■</span> Radio Astronomy</li> <li><span style="color: orange;">■</span> Radiodetermination Satellite</li> <li><span style="color: gold;">■</span> Radiolocation</li> <li><span style="color: darkgreen;">■</span> Radiolocation Satellite</li> </ul>	<p><b>SELECTED POINTS OF INTEREST:</b></p> <ul style="list-style-type: none"> <li>1 Underground Cable Locating Equipment</li> <li>2 eLORAN</li> <li>3 ADF Non-Directional Beacons (NDB)</li> <li>4 AM Radio Broadcast</li> <li>5 WWV Time Standard Signals</li> <li>6 Major World Air Route Areas (MWARA)</li> <li>7 International Shortwave Broadcasters</li> <li>8 Citizen Band Radios (CB)</li> <li>9 VHF Television (TV)</li> <li>10 FM Radio Broadcast</li> <li>11 VHF Omni-Directional Range (VOR)</li> <li>12 Instrument Landing System (ILS - LOC)</li> <li>13 Civil Aircraft Communications Radio</li> <li>14 Emergency Locator Transponders (ELT)</li> <li>15 International Maritime Channels</li> <li>16 Garage Door Openers</li> <li>17 Automobile Remote Keyless Entry (RKE)</li> <li>18 Aircraft Landing Glide Slope (GS)</li> <li>19 UHF Television (TV)</li> <li>20 Bluetooth Communications Radio</li> <li>21 Distance Measurement Equipment (DME)</li> <li>22 Aircraft ATC Radar Transponders</li> <li>23 Global Positioning System (GPS, L1)</li> <li>24 Broadcast Satellite Radio Services</li> <li>25 Wireless Local Area Networks 802.11b, g, n (Wi-Fi 4), ac (Wi-Fi 5), ax (Wi-Fi 6)</li> <li>26 Bluetooth Personal Area Networks (PAN)</li> <li>27 Microwave Ovens</li> <li>28 Satellite Television Broadcast</li> <li>29 Aircraft Radar Altimeters</li> <li>30 Wireless Local Area Networks (WLAN) 802.11a, n (Wi-Fi 4), ac (Wi-Fi 5), ax (Wi-Fi 6)</li> <li>31 Weather Radar - Large Aircraft</li> <li>32 Point-to-Point Telecom Infrastructure</li> <li>33 Weather Radar - Small Aircraft</li> <li>34 Maritime Radar</li> <li>35 Police Radar Speed Measurement</li> <li>36 Radar Motion Detectors (Doors &amp; Alarms)</li> <li>37 Direct Broadcast Satellite</li> <li>38 Inter-Satellite Frequency &amp; Time Standard Reference</li> <li>39 Automotive Radar</li> <li>40 Inter-Satellite Radiolocation</li> <li>41 Fixed Satellite Service: Space-to-Earth All Regions</li> <li>42 Fixed Satellite Service: Earth-to-Space All Regions</li> </ul>	<p><small>*Selected Points of Interest* are based on popular applications and may not be exhaustive or applicable for all nations. This chart represents a snapshot in time of the International Telecommunications Union (ITU) worldwide spectral allocations summarized in the ITU Radio Regulations. As such, it does not completely reflect all aspects such as national and regional changes. Users should always consult their national regulatory bodies for current allocations. This chart does not differentiate between Co-PRIMARY and Secondary allocations. Allocations are listed from top to bottom in the order they appear in Table 2.106. Horizontal logarithmic scale has been exaggerated on some very narrow bands for readability.</small></p> <p style="font-size: 8px;">Source: ITC/CCO/ITU, Table of Frequency Allocations, Code of Federal Regulations - Title 47, Section 2.106, Revised on February 3, 2021</p>
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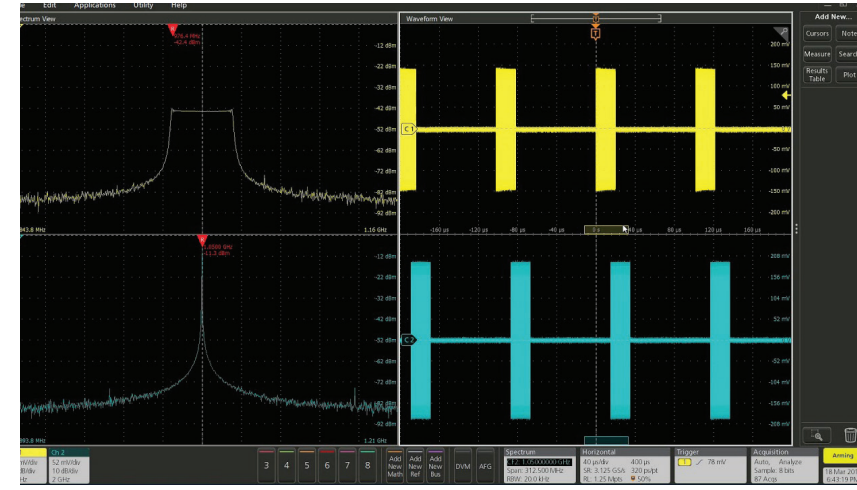
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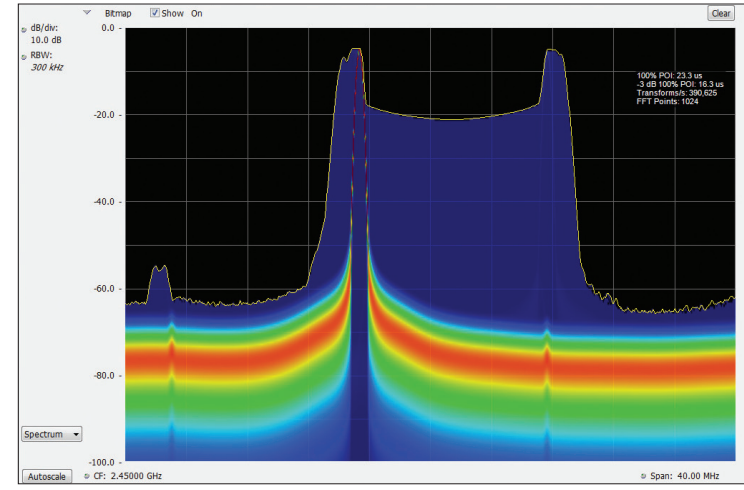


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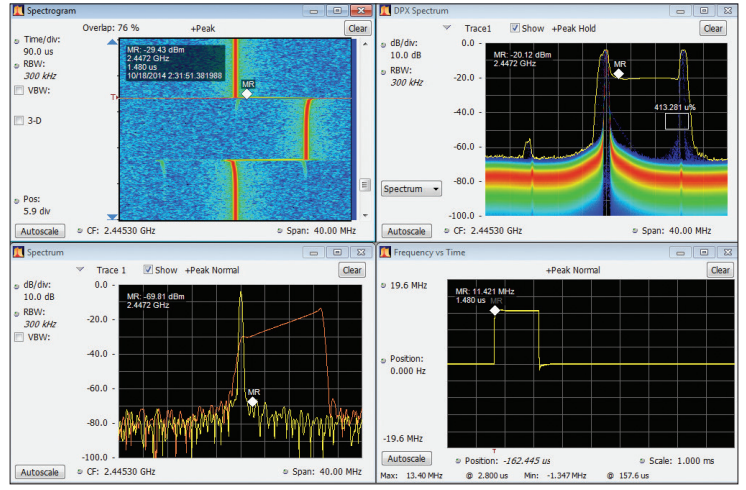
Discover more



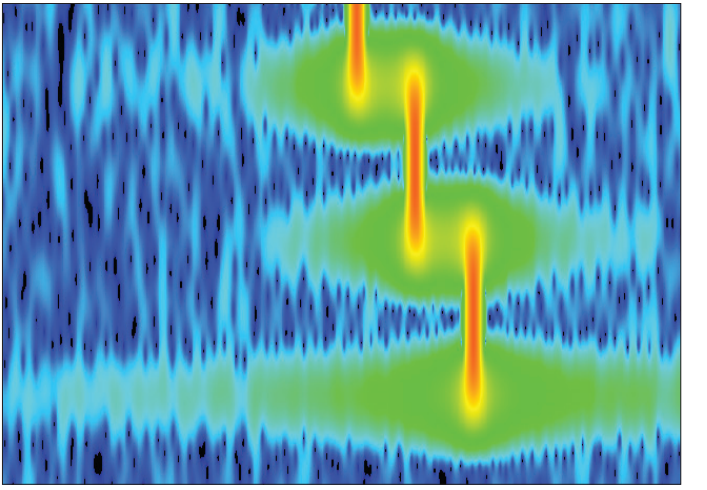
Gain deeper insight



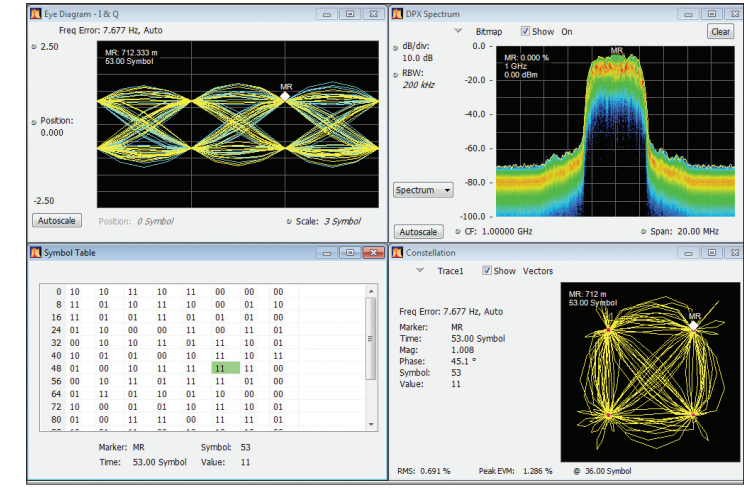
Trigger on frequency changes



Capture seamlessly into memory



Analyze multiple domains



## COMMON WORLDWIDE WIRELESS TECHNOLOGIES

CELLULAR NETWORKS			
GENERATION	TECHNOLOGY	CHANNEL SPACING	COMMON FREQUENCIES
2G	IS-136T	12.5 MHz	800 MHz (GSM), 900 MHz (GSM), 1800 MHz (GSM), 1900 MHz (GSM)
	IS-136S	12.5 MHz	800 MHz (GSM), 900 MHz (GSM), 1800 MHz (GSM), 1900 MHz (GSM)
3G	W-CDMA	5 MHz	2100 MHz (UMTS), 2170 MHz (UMTS)
	TD-SCDMA	1.6 MHz	1880 MHz (TD-SCDMA), 1920 MHz (TD-SCDMA)
4G	LTE-FDD	1.4 MHz	1880 MHz (LTE-FDD), 1920 MHz (LTE-FDD)
	LTE-TDD	1.4 MHz	1880 MHz (LTE-TDD), 1920 MHz (LTE-TDD)
5G	NR-FDD	5 MHz	2100 MHz (NR-FDD), 2170 MHz (NR-FDD)
	NR-TDD	5 MHz	2100 MHz (NR-TDD), 2170 MHz (NR-TDD)

IoT / LOW POWER WIRELESS AREA NETWORK (LP-WAN)			
TECHNOLOGY	CHANNEL SPACING	COMMON FREQUENCIES	
LoRa	125 kHz	868 MHz, 915 MHz, 920 MHz	
LoRaWAN	125 kHz	868 MHz, 915 MHz, 920 MHz	

LOCAL AREA NETWORKS (LAN)			
TECHNOLOGY	CHANNEL SPACING	COMMON FREQUENCIES	
Wi-Fi	20 MHz	2.4 GHz, 5 GHz	
Bluetooth	1 MHz	2.4 GHz	

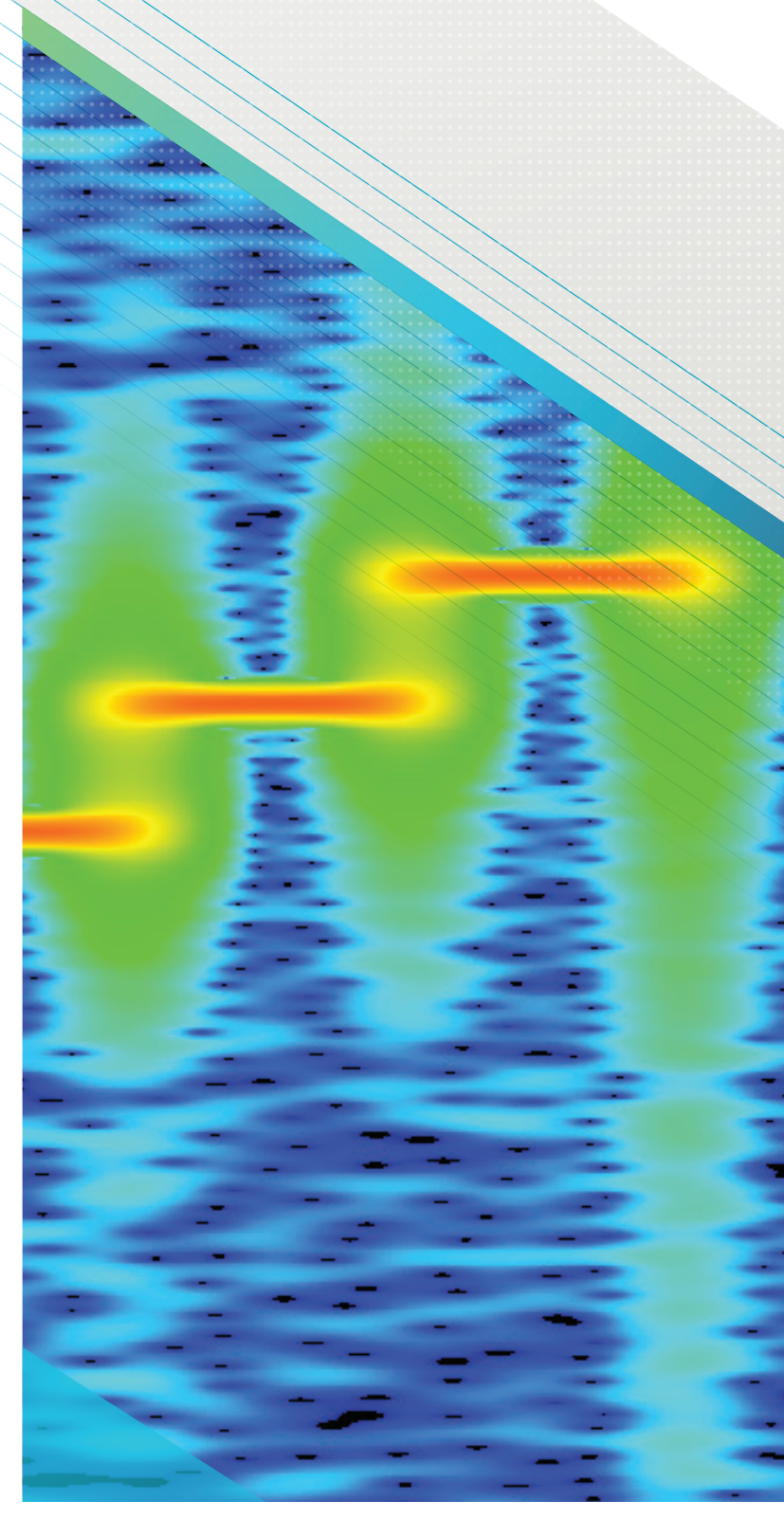
PERSONAL AREA NETWORKS (PAN)			
TECHNOLOGY	CHANNEL SPACING	COMMON FREQUENCIES	
Bluetooth	1 MHz	2.4 GHz	
Bluetooth LE	1 MHz	2.4 GHz	



# Worldwide Spectrum Allocations

(Courtesy of Tektronix - 2021)

POSTER



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