

# CONSUMERS BENEFIT FROM UNLICENSED SPECTRUM

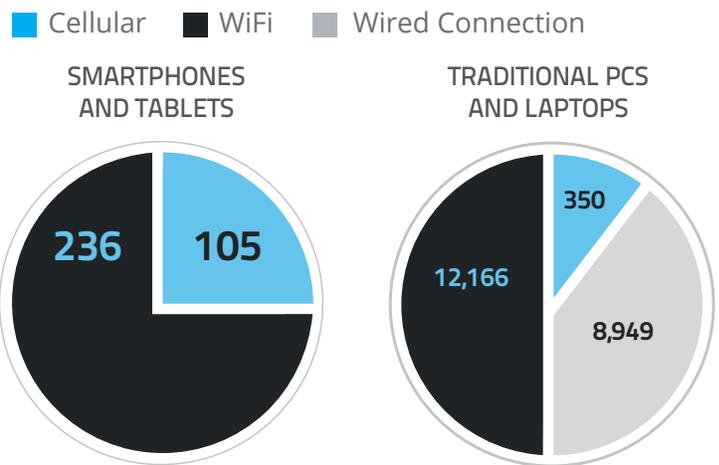
## UNLICENSED SPECTRUM INNOVATION

The continuing explosion of new communications devices and services requires policymakers to carefully consider spectrum management policies that will facilitate the growth of both licensed and unlicensed services. Every day, we see remarkable new uses for WiFi technology that provide consumers with new benefits, businesses with new opportunities, and those in need with lifeline connections. The efficient and expanded use of unlicensed spectrum resources is fundamental to the success of U.S. economic policy, U.S. competitiveness, and individual businesses. The unlicensed industry anticipates generating an estimated \$50-\$100 billion annually for the American economy.<sup>1</sup>

The cable industry is investing heavily in unlicensed technologies and is leading the charge in deploying WiFi hotspots, which utilize unlicensed spectrum, throughout the country. To date, the cable industry has deployed more than 200,000 WiFi hotspot access points. In addition to serving consumers in the nation's major urban areas, cable operators offer WiFi in rural areas, such as BendBroadband's WiFi offering in central Oregon.

As the Federal Communications Commission considers spectrum policy issues, including the design of broadcast incentive auctions, the cable industry encourages policymakers to seek "win-win" solutions that will enable consumers to benefit from licensed and unlicensed spectrum.

## TRAFFIC CARRIED BY DIFFERENT CHANNELS FOR DIFFERENT TYPES OF DEVICES (PB<sup>2</sup> PER MONTH)<sup>3</sup>



## CONSUMERS CAN'T GET ENOUGH OF UNLICENSED

Usage of cable WiFi has been skyrocketing, with consumers now spending tens of millions of minutes per day on these networks. This is consistent with global trends. WiFi now carries more Internet traffic to consumers' smartphones, tablets, laptops and PCs than licensed wireless and wired connections combined.

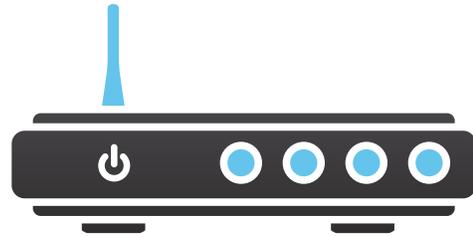
In addition to benefiting consumers, cellular carriers increasingly rely on WiFi offload for smartphone traffic, and the vast majority of tablets and laptops also use WiFi.

1 Mark Cooper, "Efficiency Gains and Consumer Benefits of Unlicensed Access to the Public Airwaves," January 2012.  
 2 1 petabyte (PB) = 1 million gigabytes (GB)  
 3 Richard Thanki, "The Economic Significance of License-Exempt Spectrum to the Future of the Internet," June 2012.

## MORE UNLICENSED SPECTRUM IS NEEDED TO MEET CONSUMER DEMAND

Cable companies innovating in the unlicensed space need access to additional low, middle, and high frequency spectrum because of the rapidly expanding consumer demand for unlicensed services and the increasing diversity of unlicensed applications. Existing unlicensed spectrum bands have limitations impeding use by WiFi. The increase in unlicensed spectrum use has led to a spectrum crunch in the 2.4 GHz band, which is becoming congested and interference-prone in larger markets. Although portions of the 5 GHz band are available for unlicensed use, current restrictions on these bands, including power level limits, prohibition on outdoor use, and requiring “listen before talk” capability, make the majority of these frequencies unattractive for WiFi.

This means that cable WiFi innovators need additional spectrum in the 600 MHz band, the 3.5 GHz band, and the 5 GHz band. None of these bands, standing alone, will support a continuation of the economic engine that unlicensed technologies have created because no one band has the characteristics needed for the various jobs we call on unlicensed technologies to do (e.g., indoor vs. outdoor use, long-range vs. short-range transmissions).

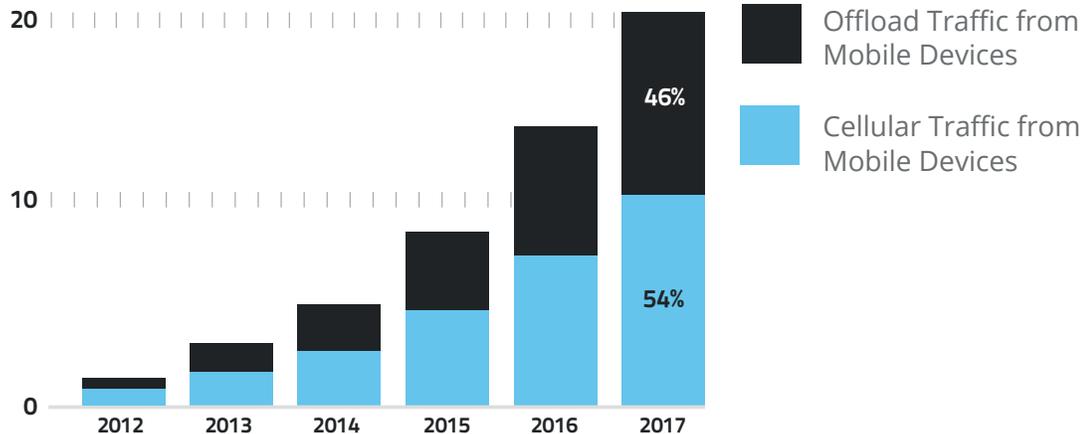


## GOVERNMENT REGULATION OF UNLICENSED SPECTRUM SHOULD BE MINIMAL

To continue the surge in growth and productivity of unlicensed wireless services such as WiFi, the government should continue its successful “hands-off” regulatory approach. This approach encourages innovation because anyone can use unlicensed spectrum just by following technical rules – without having to comply with a maze of regulations that apply to licensed services. This low-regulation system allows innovators to rapidly develop and deliver millions of unlicensed offerings such as WiFi hotspots, medical equipment, industrial/logistics/inventory systems, wireless headsets, cordless phones, remote car door openers, RFID, and wireless keyboards.

## 46 PERCENT OF TOTAL MOBILE DATA TRAFFIC WILL BE OFFLOADED IN 2017

*Exabytes per month*



Source: Cisco VNI Mobile, 2013

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