FCC:

As an operational Wireless ISP in the US utilizing primarily the 5GHz unlicensed spectrum, the comments we wish to post are affirmative for the expansion of the frequency band 3.7-4.2ghz.

We propose the following restrictions on the band to ensure proper and responsible use of the frequencies:

* Client devices must have a directional antenna gain of at least 19dBi.
  + This ensures coexistence of carriers and clients in a mixed FDD and TDD system.
  + There has never been a situation that a client gain less than this is even desired from a technical standpoint.
  + Consumer Grade Wi-Fi already has nearly 1ghz of usable spectrum
* Access points must be able contain 90% of their transmitted power to a single client in less than 100 Degrees azimuth.
  + Our experience shows omnidirectional and 120 degree antennae to be major causes of interference in the area.
  + When transmitting data to an individual, the less geographical area that is able to receive this signal, the less interference the AP causes to unintended receivers.
  + Beam-forming is beneficial in this regard.
* Carrier call signs must be present on all transmissions, to ensure rogue carriers and interferers can be contacted.
  + In the 5ghz band, there is no way to easily identify a 5ghz signal as LTE-U, 802.11, and proprietary methods do not have an industry standard call sign, interference must be located using a specialist on the ground with a directional frequency analyzer.
* If using regional frequency coordination(like the CBRS band) a band should be available(suggestion of around 100mhz) following the above guidelines for general use by competent operators.
  + This allows operators who were not present in an area during the 3 year PAL license auction to still be able to operate well in new areas
  + No one carrier can then purchase and lockout other newer carriers from operation and competition.

With current unregulated access to the UNII-1 and UNII-3 band, the effective spectrum available to us to use is limited to around 300 MHz using the UNII-2 band. Using this 300 MHz of unlicensed bandwidth, we have redefined what an ISP should be and what it should deliver. Unlimited data, Broadband speeds(25mbps minimum, up to 100+mbps plans), and a low stable price which allows rural and suburban communities to gain access to the internet at never before seen speeds in the area.   
  
With an additional 500MHz of lightly licensed bandwidth available our expected end user speeds would not only be cheaper to deliver but also be free from interference from non technical 802.11(home wifi) operators.

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