



The

Broadcasters' Desktop Resource

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... edited by Barry Mishkind – the Eclectic Engineer

Broadcast Operations

The FCC's 5G Mandate: What's the Plan?



By Karen Johnson

[April 2020] The coming C-Band reallocation process continues, with the Federal Communications Commission (FCC) issuing a 185-page [“Fact Sheet” on the Report and Order in Docket 18-122](#). Understanding what is coming is important as most broadcasters have at least one dish feeding them.

The die is cast. Not even a global pandemic will likely delay the clearing of the Mid-band spectrum for broadband use.

The FCC has adopted an Order of Proposed Modification to share the mid-band, or C-Band, spectrum with broadcasters. Over the next five years, US C-Band earth stations will be in transition. Because of this, there is a strong likelihood that – directly or indirectly – the C-Band content you receive or produce will be affected.

WHY C-BAND?

C-Band – the spectrum consisting of 3.7 to 4.2 GHz – is considered 5G's sweet spot, offering the best in geographic coverage and the ability to host large amounts of data.

No wonder broadband wants the spectrum for 5G.

But transitioning such a large swath of the mid-band spectrum – and cramming all of those currently utilizing the space from a comfortable 500 MHz to a mere 200 MHz – is no easy task.

A PIECE MEAL DECISION

The FCC crafted a mandate rejecting the now (for all intents and purposes) defunct C-Band Alliance, yet scavenged the CBA's original concepts for pieces and parts.

The Order summarily dismissed the CBA's carefully crafted strategy of centralized planning, and adopted a patchwork of separate entities – as many as six – that serve as funnels for various aspects of the repack, including operations and reimbursements.

One of the time-saving moves the CBA had proposed – and nixed by the Commission – was the “one technician / one trip” idea. Meaning, at any one site the satellite operators each had an antenna, the CBA would task a single technician, or team of technicians, to perform filter installations, adjustments or modifications.

Now, each satellite operator must work independently, and meet critical deadlines set by the

Commission.

INCENTIVIZED ACCELERATED MOVE

The FCC has given the four major space station operators the option of a “quick acceleration” – clearing 120 MHz (3.7-3.82 GHz) in the top 46 PEA’s. The deadline? No later than December, 2021.

In a second sweep, the remaining 180 megahertz (3.82 - 4.0 GHz) would be cleared by September 30, 2023. If these benchmarks are met, the space station owners will receive an accelerate relocation payment.

Financial incentive notwithstanding, since the FCC has mandated that each satellite operator must clear the spectrum independently, it is a lot of additional work – and pressure – for the space station operators to reach these benchmarks. (Remember the now defunct “one technician / one trip” idea? That would have really come in handy.) And, if they attempt these benchmarks and fail, substantial penalties will be issued.

Which is why - as part of the new Order - a super-majority of 80% of the satellite owners must be all in, or the idea of an accelerated timeline is scrapped and a Plan B – the original clearing schedule of 5 years – will be embraced.

Early indications suggest that SES and Eutelsat will agree with the accelerated plan. Intelsat – because of the aggressive timeline and subsequent penalties – is still weighing the pros and cons of participating in a rapid clearing.

By May 29th, a decision must be made. The satellite operators will vote yes or no to accelerated relocation, with their decision announced June 12.

THE NEXT BIG DEADLINE: THE TRANSITION PLAN

While each satellite company currently weighs the pros and cons of their participation in the

acceleration plan, they are moving forward as if the accelerated timeline has been mutually agreed upon and confirmed.

Transition plans are being aggressively mapped out between earth station operators and satellite providers. No matter which decision satellite owners embrace, **each satellite company must file their transition plan with the FCC by June 12 of this year.**

TAKEAWAYS FOR BROADCASTERS

- **The 5G auction in the top 46 markets is the key to funding the C-band transition for registered downlinks.** Whatever your antenna may need – a filter, repoint, even a replacement – will be covered by the repack. What’s more, you will not be asked to pay the transition costs upfront; your network provider will keep track of your antenna modifications and file for reimbursement.
- The FCC has allocated \$3-\$5 billion for new orbital satellites and filters, but **only earth stations currently in the FCC database will be reimbursed;** their power level protected. While companies with antennas located in rural areas may never face interference issues, others should begin thinking about interference mitigation.

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- Please – do not simply buy a filter – even if it is advertised as a 5G interference filter, and attempt to handle the modifications yourself. Contact one of your network’s engineering departments and ask for their recommendation of a filter and a reputable installer.
- **Make sure your downlinks are on someone’s list. Today.** Your network or space provider needs to know about each and every registered C-Band downlink in your network to ensure that they have been accounted for in the satellite owner’s transition plan.

As a content delivery provider, we are actively working with each of the satellite owners on behalf of the dozens of networks - both Ku and C-Band - that we manage. We have detailed

lists that we are presenting to the satellite owners that will be included in their reports to the FCC in May.

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Karen Johnson and her husband / business partner Mark Johnson are principals of LinkUp Communications Corporation, a broadcast integration company based in Panama City, Florida that specializes in satellite technology.

A broadcaster and entrepreneur, Karen has spent two decades championing the power of satellite to deliver broadcast-quality radio and video that is live and immediate. Contact Karen at: karen@linkupcommunications.com

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