

FCC Spectrum Regulation: Protecting Critical Systems

Three recent FCC decisions tell the story

1. March 2020 - Opening up C-Band frequencies for 5G
2. April 2020 – Ligado Networks allowed to repurpose L-band spectrum
3. November 2020 - Repurposing the 5.9 GHz “safety band”

1. Opening up C-Band frequencies for 5G

- March 2020 – FCC decides to open up frequencies in C-band for 5G.
- November 2020 – FAA seeks, through NTIA, to postpone planned auction based on concerns about interference with radio altimeters. NTIA refuses to convey FAA's objections to FCC and FCC doesn't mention them in the docket.

“Career NTIA engineers concluded that FAA’s data failed to demonstrate a serious threat, and the determination was made to move forward with the auctions after consultation with Commerce officials at the highest level and White House staff.” Adam Candeub, Acting Director, NTIA

- December 2020 – FCC auctions off C-band frequencies for nearly \$80 billion.

1. Opening up C-Band frequencies for 5G (continued)

- November 2021 – Planned December 5 rollout of new 5G services postponed until January 5.
- December 7, 2021 – FAA issues two airworthiness directives prohibiting reliance on radio altimeters when potential for 5G interference exists.

2. Ligado Networks allowed to repurpose L-band spectrum

April 2020 – Over strenuous objections from Executive Branch agencies, FCC permits Ligado to deploy 5G services through a network of terrestrial towers.

“Our action provides regulatory certainty to Ligado....”

2. Ligado Networks allowed to repurpose L-band spectrum (continued)

- Secretary of Defense Mark Esper (*WSJ* op-ed):

“The FCC’s decision will disrupt the daily lives and commerce of millions of Americans and inject unacceptable risk into systems that are critical for emergency response, aviation and missile defense.”

- 32 senators write letters to Commission members objecting
- NTIA and industry groups file petitions for reconsideration
- Congress orders DOD to commission NASEM study
- “RETAIN* GPS and Satellite Communications Act” introduced

*Recognizing and Ensuring Taxpayer Access to Infrastructure Necessary for....

3. Repurposing the 5.9 GHz “safety band”

- November 2020 – Over repeated DOT objections, FCC repurposes 45 MHz in the 5.9 GHz “safety band” for use by unlicensed wi-fi content providers.
- Remaining 30 MHz shifted from DSRC standard to cellular V2X technology. DOT registers objections again.
- House T&I Committee Chairman Peter DeFazio writes: *“For an agency that has no expertise in transportation safety to make such a decision over the objections of safety experts is troubling.”*

A broken system

Opening up C-band frequencies put aviation at risk.

Authorizing Ligado's 5G services put GPS at risk.

Repurposing the 5.9 GHz band put auto safety at risk.

Bottom line: Executive Branch departments responsible for national defense, national security, and safety-of-life systems are reduced to hapless petitioners before an independent regulatory agency that has the final say.

Legislative remedies for consideration

1. Mandatory Presidential review of any proposed FCC decision likely to adversely affect a “critical system”
 - DOT airline route award model
 - 60-day deadline
 - Either approval or remand – no “substitute decision”
 - In cases of remand, reasons given

Legislative remedies for consideration

2. Eliminate burden of proof provision as applied to Executive Branch agencies

47 U.S.C. §157(a): “It shall be the policy of the United States to encourage the provision of new technologies and services to the public. Any person or party (other than the Commission) who opposes a new technology or service proposed to be permitted under this chapter shall have the burden to demonstrate that such proposal is inconsistent with the public interest.”

The Administrative Procedure Act provides the opposite for most other administrative decisions:

5 U.S.C. §556(d) : “Except as otherwise provided by statute, the proponent of a rule or order has the burden of proof.”

Legislative remedies for consideration

3. The Administration should propose a third amendment requiring that the FCC establish its decisional criteria for identifying harmful interference in advance of any proceeding that might result in such harmful interference.

FCC Ligado order (p. 28): “In sum, the Commission has not used a 1 dB C/N₀ degradation metric as the basis for establishing the technical limits for adjacent band ATC operations to protect GPS device operations within the RNSS allocation. Nor had parties previously raised the need to establish criteria to protect against interference to GPS receivers operating well beyond the bounds of the RNSS spectrum allocation.”

Legislative remedies for consideration

4. Prohibit NTIA from second-guessing Executive Branch agencies regarding the protection of their critical systems or impeding their ability to communicate with the FCC in their areas of expertise.

Case in point:

NTIA's refusal to convey FAA concerns about interference with radio altimeters prior to the C-band auction arguably –

- a. misled the bidders regarding spectrum value
- b. compromised the FAA's statutory responsibility

Discussion?