CLIENT ALERT:

FCC's 3.7-4.2 GHz Order and NPRM

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Today the FCC approved an Order and Notice of Proposed Rulemaking for Expanding Flexible Use of the 3.7 to 4.2 GHz Band. The document proposes expanded terrestrial use of the band and seeks comment on the mechanisms for integrating new and incumbent use. Coming on the heels of a freeze on applications for new earth stations and space stations in 3.7-4.2 GHz band, it also seeks to collect specific information about earth stations and space stations currently operating in the 3.7-4.2 GHz band.

The attached statements of FCC Chairman Pai and Commissioners Carr, Rosenworcel and O'Reilly confirm the FCC's commitment to expedited transition of C-band spectrum for mobile broadband and other advanced wireless services. Thus, this proceeding will have major consequences on incumbent satellite and earth station operators, as well as satellite service providers and end users. In addition, while this proceeding does not affect satellite or earth station operations in the corresponding uplink band at 5.925-6.425 GHz, the hard-coded pairing of C-band uplink and downlink frequencies will inevitably have impacts on the uplink band and a rulemaking proceeding for that band is under consideration by the FCC.

The Order seeks additional information about current users of the 3.7-4.2 GHz band. Earth station operators are requested to provide the following types of information for each antenna:

- call sign (or IBFS file number if a registration is pending);
- licensee and point of contact information;
- geographic location and antenna operating parameters;
- satellite(s) at which the earth station is pointed, transponder used and frequency of use;
- certification that the earth station was constructed and operational as of April 19, 2018.

Satellite operators in the 3.7-4.2 GHz band are requested to provide the following types of information:

- satellite call sign, name, orbital location and expected end-of-life;
- approximate launch dates for additional C-band satellites with pending applications and which do not yet have pending applications;
- active transponders and frequency of use to serve the United States;
- center frequency and bandwidth of TT&C beam(s), and call sign and geographic location of TT&C receive site(s).

The Notice of Proposed Rulemaking seeks comment on the future of incumbent use of the band (including satellite) and proposes mechanisms for expanding flexible terrestrial use. The FCC also examines today's 3.7-4.2 GHz terrestrial microwave band plan and invites feedback on possible changes.

Incumbent Use. The FCC suggests the possibility of separating incumbents into different classes based upon length and frequency of operations, including those that still have the ability to register earth stations during the 90-day extension window. The FCC seeks comment on whether to codify the temporary freezes that have been placed on applications for satellite licenses and registrations, except in cases of existing space station authorizations. The FCC also considers reexamination of the full-band, full-arc policy for earth station operations in 3.7-4.2 GHz, and seeks input on the current and future economic value of fixed-satellite service ("FSS") in that band.

Mechanisms for Expanding Flexible Use. The FCC proposes to add a co-primary Mobile allocation to the 3.7-4.2 GHz band and license the band for flexible mobile use ("MBX") on an exclusive, geographic area basis. The FCC requests input on protection criteria for FSS earth stations from MBX mobile use. Nevertheless, in apparent recognition that co-frequency "sharing" will be difficult at best, the FCC focused on three different potential mechanisms for clearing incumbent users out of some or all of the band, in order to facilitate expanded flexible MBX use: a market-based approach, an auction approach, or some combination of the two.

The market-based approach would utilize a cooperative entity created by satellite operators to coordinate negotiations with terrestrial operators and clear and repack the spectrum. The FCC would have a review and authorization role in this process.

The FCC suggests four possible auction mechanisms: an overlay auction, an incentive auction, a capacity auction, or a combination of the foregoing. For each of the mechanisms described, the FCC requests an analysis of the economic benefits and disadvantages of the plan as well as means of protecting incumbents. The FCC also requests comment on implementing point-to-multipoint terrestrial fixed services, allocating spectrum for flexible terrestrial use in the lower segment in the band, and the possibility of Ku-band capacity as a replacement for C-band.

Band Plan. The FCC notes that the current band plan for incumbent terrestrial fixed service (chiefly fixed point-to-point microwave links) is segmented into 20 megahertz channels, but that it does not necessarily need to remain this way. It seeks feedback on proposals to create larger channels, or to have channels of different sizes depending on the needs and uses of operators.

Further information regarding the effective date of the Order and Notice, and the comment filing dates, will be published shortly in the Federal Register. The FCC has not yet released the final text of its proposal, but the FCC's News Release announcing its action can be found here, and a public draft of the FCC's Order and Notice of Proposed Rulemaking for Expanding Flexible Use of the 3.7 to 4.2 GHz Band can be found here.

Please feel free to contact Carlos Nalda, Richard Cameron, or any of the LMI Advisors team if you have any questions or would like to discuss the scope or impact of the FCC's proposals.

STATEMENT OF
CHAIRMAN AJIT PAI

Re: *Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, GN Docket No. 18-122; *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, GN Docket No. 17-183; *Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission's Rules to Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless Broadband Service in the 3.7-4.2 GHz Band*, RM-11791; *Fixed Wireless Communications Coalition, Inc., Request for Modified Coordination Procedures in Band Shared Between the Fixed Service and the Fixed Satellite Service*, RM-11778

In the 1975 summertime blockbuster *Jaws*, Police Chief Martin Brody, after a single glance at the massive shark lurking just beneath the water's surface, memorably observed, "You're gonna need a bigger boat." This summer, we face a similar situation as next-generation 5G wireless innovations loom. It's apparent that we're gonna need a bigger boat as well—or in our case, more spectrum.

Our boat gets bigger today as we aim to make more spectrum available for the 5G future. Our focus here is on making more intensive use of the 3.7-4.2 GHz band, commonly called the C-band. To help us figure out the best way forward, we authorize the collection of additional information from the band's current users. That data will help us figure out how to accommodate the needs of incumbents, which are primarily using the band to provide Fixed Satellite Service. It'll also enable us to free up more spectrum for advanced wireless services.

Additionally, we seek comment on ways to open up some or all of this band for terrestrial wireless broadband use. Most notably, we tee up a number of market mechanisms for reallocating C-band spectrum. Like the $3,000 bounty placed on the shark in *Jaws*, we hope to identify a mechanism that will unleash a frenzy of activity in this band.

Many thanks to the staff who have contributed to this complicated item. From the Wireless Telecommunications Bureau: Stephen Buenzow, Peter Daronco, Thomas Derenge, Ariel Diamond, Anna Gentry, Joyce Jones, John Lambert, Roger Noel, Matthew Pearl, Paul Powell, Becky Schwartz, Blaise Scinto, Dana Shaffer, Jeffrey Tignor, Colin Williams, Brian Wondrack, and Janet Young; from the International Bureau: Jose Albuquerque, Christopher Bair, Paul Blais, Kathleen Campbell, Diane Garfield, Jennifer Gilsenan, Kal Krautkramer, Robert Nelson, and Jim Schlichting; from the Office of Engineering and Technology: Bahman Badipour, Martin Doczkat, Chris Gao, Navid Golshahi, Michael Ha, Ed Mantiply, Tom Mooring, Nicholas Oros, Robert Pavlak , Barbara Pavon, Jamison Prime, Ron Repasi, and Rodney Small; from the Office of Strategic Planning & Policy Analysis: Evan Kwerel, Paul Lafontaine, and Jonathan Levy; from the Media Bureau: Thomas Horan and Sean Yun; and from the Office of General Counsel: Ashley Boizelle, Deborah Broderson, David Horowitz, Thomas Johnson, Linda Oliver, and Bill Richardson.