

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
)
Comment Sought on Defining Commencement) GN Docket No. 12-268
of Operations in the 600 MHz Band)

COMMENTS OF CTIA – THE WIRELESS ASSOCIATION®

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II. IT IS ESSENTIAL THAT THE COMMISSION ADOPT A CLEAR STANDARD FOR COMMENCEMENT OF SERVICE.

In defining the term “commence operations,” it is essential that the Commission adopt a standard that is readily understood by all stakeholders and leaves no doubt as to the regulatory obligations of affected parties. The definition the Commission chooses will have a significant impact on the framework the Commission has established for transitioning various incumbent operations out of the 600 MHz band. It will also establish key obligations for incoming 600 MHz licensees. The Commission can best facilitate this band transition by adopting clear standards and empowering wireless carriers to initiate the transition process.

As the Commission observes in the Public Notice, the definition of “commence operations” impacts numerous other incentive auction rules, making the choice of definition particularly important.² Before commencing operation wireless carriers must provide 120 days’ notice to Low Power Television (“LPTV”) and TV translator stations,³ and must coordinate with the National Science Foundation regarding operations at permanent fixed locations near certain radioastronomy service observatories.⁴ And critically, the date of a 600 MHz wireless licensee’s commencement of operations triggers the obligation of the secondary users of the 600 MHz band (namely LPTV, TV translator, broadcast auxiliary service, and TV white space device operations) to vacate the band.⁵ Each of these steps is essential in promoting an efficient, interference-free deployment of wireless services in the reallocated 600 MHz spectrum.

² Public Notice ¶¶ 3-4.

³ *Id.* at n.10.

⁴ *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6567, ¶ 293 (2014) (“*Incentive Auction Report and Order*”).

⁵ Public Notice ¶ 4.

In light of these requirements, the Commission should adopt a standard for commencement of operations that: (1) creates a definition that is easily and readily understood by interested parties, (2) reflects the unique deployment challenges for mobile operators arising from impairments in the 600 MHz band, and (3) unambiguously establishes the regulatory obligations of those affected. As explained below, the Commission should adopt a standard that allows incoming 600 MHz licensees the full flexibility of determining and declaring their intent to commence service.

III. TO PROMOTE AN EFFECTIVE 600 MHZ FREQUENCY ENVIRONMENT, LICENSEES MUST HAVE THE FLEXIBILITY TO TEST AND DEPLOY SERVICES FREE FROM INTERFERENCE.

A. The Commission’s Rules Should Reflect 600 MHz Licensees’ Considerable Investment and Primary Usage Rights.

The Commission’s chosen definition of “commence operations” will have a significant impact on the rights and obligations of both primary and secondary licensees, and it is critical that 600 MHz wireless licensees’ primary usage rights be reflected in these rules. To acquire primary rights to operate in the 600 MHz band, wireless carriers will be required to make substantial investments during the forward auction. Conversely, the operations to be cleared upon commencement of service are secondary operators who did not purchase their spectrum rights and should not be provided additional protections that are not contemplated by FCC rules or the Spectrum Act.

When the Commission adopts rules governing the “commencement of operations,” these rules should enable 600 MHz wireless licensees to deliver on their investment in an efficient and prompt manner. As explained in further detail below, wireless network deployment in the 600 MHz band will carry particular challenges, as many licenses will be subject to various levels of continuing impairment. Further, carriers will be required to comply with buildout requirements

established by the Commission. These buildout requirements begin as soon as wireless licenses are granted, highlighting the importance of facilitating quick and streamlined access to this spectrum. For carriers to achieve the Commission’s policy goal of prompt, efficient, and robust deployment, 600 MHz licensees must be able to access their spectrum free from impediments, without unnecessary procedural burdens or processes.

The Commission has proposed that white space device operators, who have secondary status, will be able to immediately and automatically access the duplex gap and guard bands upon the conclusion of the Post-Auction Transition Period. It would defy logic to adopt a slower and more burdensome process for wireless licensees who pay billions of dollars for the right to use their spectrum. Thus, the Commission should not require licensed wireless operators to go through a slow and arduous formal notice process to obtain access to spectrum where they have primary rights.⁶ Instead, the Commission should adopt a framework under which 600 MHz licensees are able to access their spectrum promptly and through a relatively straight-forward process.

B. Secondary 600 MHz Operations Should Not Be Permitted to Interfere with Licensed 600 MHz Wireless Spectrum Use.

Effective pre-deployment network testing requires an interference-free environment. This is true both as a general matter and in light of the unique frequency environment in the 600 MHz band. The Commission should therefore not adopt its proposed “site commissioning test” trigger, which will not be sufficient to promote an effective network testing and deployment process. Instead, the Commission should adopt a definition of “commence operations” that requires secondary users to clear the relevant 600 MHz spectrum when a wireless licensee initially transmits on its licensed spectrum, including for pre-service deployment testing.

⁶ *Id.* at n.11.

1. Unique Impairments in the 600 MHz Band Underscore the Importance of Interference-Free Pre-Deployment Testing.

For 600 MHz licensees to effectively test their networks prior to deployment, they must be able to do so free from interference. Indeed, it is often the case that a particular cell site, or cluster of sites, will be tested long before the full network is ready to go “on the air.” Drive tests and propagation model tuning, for example, are standard components of any network deployment process. Network operators must be able to conduct these tests without the interference and associated disruptions caused by white space device, LPTV, broadcast auxiliary service, and/or TV translator signals. Carrier personnel who conduct this pre-deployment testing must be able to work in a frequency environment that accurately represents what will be present post-deployment to consumers. It would undermine the very purpose of testing to require that it be conducted in the presence of interference that will not be present when full-scale operations commence.

While pre-deployment testing is a vital component of network planning as a general matter, the unique characteristics of the 600 MHz band will make this process even more important. Each 600 MHz channel will have its own unique technical characteristics and many will be subject to various levels and locations of impairment due to the presence of broadcast television incumbents. These unique impairments will inform the equipment choices made by carriers and the technical specifications of network infrastructure, and may result in a “ripple effect” that alters network design in an otherwise unimpaired portion of a market. The presence of additional signals (e.g., white space devices, LPTV, broadcast auxiliary service, and TV translator signals) would severely complicate an operator’s ability to measure and respond to any license impairments created by broadcast television stations.

Moreover, because the impairments in each market will be different, a carrier doing pre-deployment testing in a particular area could not simply undertake drive tests and other on-site measurements to refine its propagation model by testing on another 600 MHz channel. More so than ever, carriers' network deployment strategies will be specific to the individual license areas and frequencies they occupy. The Commission should not compound the already significant challenges associated with non-fungibility of licenses by undermining licensees' ability to respond to these challenges during the network testing process.

2. The Initial Transmission on the Spectrum Should Serve as the Commencement of Operations.

The Commission can facilitate network deployment in the 600 MHz band by defining "commence operations" to mean the moment when a wireless carrier initially transmits on its licensed spectrum, which will likely be for the purposes of pre-service deployment testing. At this point in the deployment process, carriers must be able to collect measurement data to calibrate their propagation models or to test network configuration to respond to impairment from DTV stations. This testing will need to be channel-specific and thus incumbents must be cleared by this time. Wireless carriers should be permitted to provide requisite notice to LPTV stations, TV translator stations, and other incumbents of their intent to commence transmission and testing in advance of such work, and this notice should serve as the beginning of the 120-day "clock" or other "clocks" defining incumbents' obligations to clear the band. By defining the initiation of transmission as the moment a wireless carrier "commence[s] operations," the Commission will help ensure that this essential testing is performed in the appropriate frequency environment. This, in turn, will speed the deployment of high-quality services to consumers.

3. Site Commissioning Testing Is Too Late in the Process to be the Trigger for Commencement of Operations.

Conversely, the Commission’s “site commissioning test” trigger will not be sufficient to promote an efficient network testing and deployment process.⁷ As the Commission notes, site commissioning tests typically take place in the late stages of a deployment and after the construction and installation of network infrastructure.⁸ Indeed if, as the Commission proposes, licensees must commit to permanent base station equipment and permanent antenna or tower locations as a prerequisite to commencing operations, carriers will be required to make critical investments before they are able to ascertain their needs. This increases the chances that they will over-engineer their systems to guard against interference that in fact never arises. Such an outcome is plainly not in the public interest and is inconsistent with the methods that wireless providers use to commence operations in newly licensed spectrum bands. Should the Commission require some equipment purchasing component as part of a “commence operations” definition, the relevant equipment would be portable test transmitters and drive test equipment. However, CTIA believes that an equipment-purchasing-based regulatory trigger is neither necessary nor appropriate.

C. “Commencement of Service” Should Apply at the PEA Level.

The Commission should require that, once a licensee has commenced service (or provides notice of intent to commence service, where applicable) anywhere in a PEA, such action triggers relocation obligations *throughout* the PEA. Wireless operators have purchased rights to use all spectrum in their licensed area without impingement from ongoing secondary

⁷ The FCC proposes that a 600 MHz band licensee be deemed to “commence operations” in (a) an area (b) when it begins site activation and commissioning tests, (c) using permanent base station equipment and permanent antenna or tower locations. Public Notice ¶ 2.

⁸ *Id.* ¶ 5.

operations. These licensees should be free to use all spectrum licensed to them in a PEA free of regulatory burdens. Further, such an approach is consistent with the plain language of the Spectrum Act, which makes clear that Congress did not intend for secondary services to have rights to continued operation in the 600 MHz band once the band has been cleared and reallocated for wireless services.⁹ By adopting a framework where commencement of service, or notice thereof, in any part of a licensed PEA triggers relocation obligations throughout the PEA, the Commission will relieve wireless carriers of burdens inconsistent with the licensed spectrum rights that they will obtain at a great cost. Moreover, this approach is consistent with the FCC’s decision to adopt much smaller license areas – PEAs – as the appropriate service areas for 600 MHz Band licenses, at which time the Commission found that these areas would permit service on a “localized basis” and would “fit many wireless providers’ existing footprints.”¹⁰

The Commission’s proposed approach would, if adopted, conflict with the exclusive rights purchased by wireless operators and impose inappropriate burdens on 600 MHz wireless licensees that are inconsistent with the dictates of the Spectrum Act. The Commission has proposed that a 600 MHz band licensee’s notification would cover only the area served by the licensee’s commercial service infrastructure deployment at the time of the notice.¹¹ Under this approach, the burden would fall on 600 MHz licensees to continually update their deployment data to ensure that they receive the interference protection granted as part of their licenses. This

⁹ Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, § 6407(c), (e) (codified at 47 USC §1452), 126 Stat. 156 (2012) (“Spectrum Act”) (contemplating unlicensed services only in the guard bands). *See also id.* §§ 6001(6), 6403(b)(2) (providing that only full power and Class A television broadcasters have rights to continued operation post-repacking).

¹⁰ *Incentive Auction Report and Order* ¶¶ 71, 73.

¹¹ Public Notice ¶ 6.

is inconsistent with the primary, licensed spectrum rights obtained by wireless licensees. Moreover, requiring wireless carriers to provide such granular data would require the disclosure of competitively sensitive and proprietary information regarding their network deployment strategies. Instead, wireless carriers should only be required to submit a single notice that will apply throughout their licensed area and will require all secondary and/or unlicensed services operating within the PEA to cease operating on the licensed 600 MHz spectrum.

D. The Process for Notice of Commencement of Service Should be Left in the Control of Wireless Licensees.

Finally, because individual licensees are best positioned to know when and how they will begin testing, as well as whether their actions will be interfered with by incumbents, the notification process should be left in their hands. Specifically, the Commission should adopt a framework where wireless licensees notify LPTV, TV translator, and broadcast auxiliary service licensees, as well as TV white space database operators, directly and on a schedule that will ensure that the band is cleared when the wireless licensee commences operations. Because system testing necessarily is subject to change with respect to location, power level, and other technical characteristics, it makes little sense to require licensees to notify incumbents of particular testing parameters. Instead, the form of notice should be simple and make clear that the licensee plans to commence service (through testing) that necessitates the cessation of secondary use of the spectrum. This approach will appropriately reduce burdens for licensees and promote clear and direct communication.

IV. CONCLUSION.

CTIA's members are prepared to make substantial investment in the 600 MHz band and deploy services that will greatly benefit wireless consumers. The Commission can best facilitate this effort by establishing a regulatory framework that grants licensees prompt, unfettered access

to their licensed spectrum. Denying timely access or creating burdensome procedural hurdles for licensee access may serve to reduce the value of licenses to bidders in the forward auction, undermining the FCC's goal of reallocating spectrum to meet consumer demand for mobile broadband services.

CTIA applauds the Commission for its efforts to establish a framework and rules most conducive to a successful auction in the face of extraordinary complexities, but invites the Commission to adopt relatively simple and clear rules that will serve that same purpose where, as here, the opportunity presents itself. CTIA thus urges the Commission to adopt a definition of "commence operations" consistent with these comments.

Respectfully submitted,

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