

HOGAN & HARTSON
L.L.P.

ARI Q. FITZGERALD

DIRECT DIAL
(202) 637-5423

COLUMBIA SQUARE
555 THIRTEENTH STREET, N.W.
WASHINGTON, DC 20004-1109
TEL (202) 637-5600
FAX (202) 637-5910
WWW.HHLAW.COM

May 16, 2005

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Room TW-A325
Washington, D.C. 20554

**Re: *Ex Parte* Submission
2002 Biennial Review Proceeding
WT Docket No. 03-264**

Dear Ms. Dortch:

Crown Castle International Corp. (“CCI”), whose subsidiary, Crown Castle Mobile Media, plans to deploy a terrestrial wireless network that operates in the 1670-75 MHz band, submits this letter: (1) in support of CTIA’s proposal to modify the Commission’s PCS and AWS base station Equivalent Isotropically Radiated Power (“EIRP”) limits to afford PSC and AWS licensees the option of complying with alternative power spectral density (“PSD”) limits, [1/](#) and (2) to request that licensees in the 1670-75 MHz band be granted a similar ability to comply with alternative PSD limits. [2/](#)

[1/](#) See *Ex Parte* of CTIA in WT Docket No. 03-264 (February 7, 2005) (referencing *Ex Parte* of CTIA in WT Docket No. 03-264 (October 20, 2004)) (“CTIA February 7, 2005 *Ex Parte*”). In its February 7, 2005 *ex parte*, CTIA recommends that as an alternative to complying with the currently applicable base station limits of 1640 watts EIRP in urban areas and 3280 watts EIRP in rural areas, PCS and AWS carriers be provided the option of complying with PSD limits of 3280 watts/MHz average EIRP in urban areas and 6560 watts/MHz average EIRP in rural areas for antenna heights of up to 300 meters. *Id.* at 2.

[2/](#) CCI requests that the Commission afford 1670-75 MHz licensees the option of complying with alternative PSD limits based on the same relationship between the currently applicable PCS and AWS base station EIRP limits and the PCS and AWS

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CCI is one of the world's largest wireless infrastructure companies. Its tower portfolio in the U.S. and Puerto Rico consists of 10,612 towers. In 2003, a subsidiary of CCI was adjudged the high bidder in a Commission auction and granted a nation-wide license to operate on 1670-75 MHz. Through Crown Castle Mobile Media, CCI plans to deploy an OFDM-based, DVB-H network to transmit multiple channels of high-quality, digital video and audio programming to mobile phones and other hand-held devices. Extension of CTIA's proposal to the 1670-75 MHz band would allow CCI to more quickly and efficiently deploy its terrestrial network. Moreover, as with CTIA's proposal, nothing in CCI's request would result in higher total power levels than are already permitted in the 1670-75 MHz band.

In its February 7, 2005 *ex parte* CTIA persuasively explains why the Commission's current base station EIRP rules penalize wideband technologies such as OFDM-based technologies:

PSD limit alternatives suggested by CTIA. In the case of the 1670-75 MHz band, the currently applicable peak power limit is 2000 watts EIRP. *See* 47 C.F.R. § 27.50(f). CCI thus requests that 1670-75 MHz licensees be allowed the option of complying with a PSD limit of 4000 watts/MHz average EIRP in urban areas and 8000 watts/MHz average EIRP in rural areas.

CCI notes that in 2004, the Commission allowed 100 percent base station power increases for PCS and AWS carriers operating in rural areas. *In the Matter of Facilitating the Provision of Spectrum-Based Services to Rural Telephone Companies to Provide Spectrum-Based Services*, WT Docket No. 02-381, Report & Order (Sept. 27, 2004), ¶¶ 99,101. The reasoning provided by the Commission for increasing the base station power limits applicable to rural PCS and AWS operations also applies to 1670-75 MHz operations. A power increase in rural areas should allow CCI to expand its rural coverage while using fewer base stations. Moreover, existing rules imposed by the Commission to ensure that adjacent and co-channel operations are protected (e.g., the OOB limit applicable to 1670-75 MHz operations, contained at section 27.53(j), and coordination requirements applicable to 1670-75 MHz licensees, such as those contained in sections 1.924(g) and 27.903) are sufficient to ensure that no harmful interference will be caused by CCI's proposal.

The current EIRP base station limits force carriers utilizing wider carrier channels to operate wideband carriers at lower total power than is allowed for multiple narrower-bandwidth carriers. In essence, the costs of deployment for wider carrier channels are increased without any corresponding improvements to service quality and/or coverage. These additional costs are especially problematic for carriers attempting to deploy wideband technologies – particularly in rural areas. ^{3/}

CTIA explains further that when multiple carriers are transmitted from a single base station, “[s]ystems operating in smaller bandwidths are permitted to operate at higher power spectral density than those operating in larger bandwidths.” ^{4/} On the other hand, wideband technologies, “such as CDMA, WCDMA, or OFDM . . . are disadvantaged by the per-carrier power constraint in the current rules.” ^{5/} Accordingly, “[r]emoving [this] artificial handicap on the use of some technologies . . . would facilitate the adoption and deployment of [the wideband] technologies by wireless service providers.” ^{6/}

The same limitations that unnecessarily restrict wideband operations in the PCS and AWS bands also operate to unnecessarily restrict wideband operations in the 1670-75 MHz band. CCI must operate its 1670-75 MHz network pursuant to section 27.50(f) of the Commission’s rules. Section 27.50(f) limits base station peak power emissions in the band to 2000 watts EIRP. This rule was modeled after the rules for other Part 27 services, which were, in turn, modeled after the Commission’s PCS rules. Like many PCS and potential AWS licensees, CCI wishes to deploy its network using wideband technology, in this case OFDM-based DVB-H. However, section 27.50(f) forces CCI to operate its DVB-H network “at lower total power than is allowed for multiple narrower-bandwidth carriers.” ^{7/} Under section 27.50(f) as currently written, if CCI were to deploy a system consisting of five 1 MHz carriers in the 1670-75 MHz band, CCI could transmit at a PSD five times greater than that allowed for single 5 MHz carrier DVB-H. If

^{3/} CTIA February 7, 2005 *Ex Parte* at 2.
^{4/} *Id.*
^{5/} *Id.*
^{6/} *Id.*
^{7/} *Id.*

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CTIA's approach for an alternative PSD limit is adopted for the 1670-75 MHz band, a smaller disparity will exist between wideband and narrower-band systems.

Like CTIA, we think it important to note that nothing CCI is requesting here would permit total power levels higher than levels already permitted under the Commission's rules. As mentioned above, section 27.50(f), like the comparable rules that apply to the PCS and AWS bands, already allows multi-carrier, narrowband systems to operate at PSD levels higher than those contemplated under CCI's request.

For the reasons CTIA stated, CCI also recommends that the Commission incorporate into the 1670-75 MHz rules CTIA's measurement proposal [8/](#) and CTIA's proposal to replace the current peak EIRP limit with an average limit. [9/](#)

As the foregoing discussion makes clear, the Commission should adopt CTIA's proposal for allowing compliance with alternative PSD limits for PCS and AWS licensees operating in urban and rural areas and afford licensees in the 1670-75 MHz band a similar level of flexibility by amending section 27.50(f) of the Commission's rules. On Friday, May 13, 2005, I, on behalf of CCI, communicated the points delineated above to Sam Feder, Legal Advisor to Chairman Martin, and Lloyd Coward, Deputy Chief of the Wireless Bureau's Mobility Division.

[8/](#) See *id* at 4-5.

[9/](#) See *id* at 5-6.

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Pursuant to section 1.1206(b) of the Commission's rules, an electronic copy of this letter is being filed. Should you have any questions regarding this letter, please do not hesitate to contact me.

Sincerely,

/s/ Ari Q Fitzgerald

Ari Q. Fitzgerald
Counsel for Crown Castle International

cc: Sam Feder
Lloyd Coward