

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Commission Seeks Comment on)
OSP Working Paper 39)
) ET Docket No. 03-126
Unlicensed and Unshackled:)
A Joint OSP-OET White Paper)
on Unlicensed Devices and)
Their Regulatory Issues)

**COMMENTS OF THE
CELLULAR TELECOMMUNICATIONS & INTERNET ASSOCIATION**

The Cellular Telecommunications & Internet Association (“CTIA”)¹ hereby submits comments in response to the Commission’s May 21, 2003, Public Notice² requesting comment on the observations and conclusions contained in a joint Staff Working Paper by the Office of Engineering and Technology and the Office of Strategic Planning and Policy Analysis (“Working Paper”)³ regarding potential issues facing regulation of unlicensed devices. In the Working Paper, Commission Staff comment on a number of the recommendations presented in the Spectrum Policy Task Force Report,

¹ CTIA is the international organization of the wireless communications industry for both wireless carriers and manufacturers. Membership in the organization covers all Commercial Mobile Radio Service (“CMRS”) providers and manufacturers, including cellular, broadband PCS, ESMR, as well as providers and manufacturers of wireless data services and products.

² See *Office of Engineering and Technology and the Office of Strategic Planning and Policy Analysis Release Joint Staff Paper Regarding Unlicensed Devices and Associated Regulatory Issues*, Public Notice, DA 03-1758 (rel. May 21, 2003).

³ See Kenneth R. Carter, Ahmed Lahjouji and Neal McNeil, OSP Working Paper 39, *Unlicensed and Unshackled: A Joint OSP-OET White Paper on Unlicensed Devices and Their Regulatory Issues* (May 2003) (hereinafter “Working Paper 39”).

and also note certain additional suggestions for the regulations and use of unlicensed spectrum.

As CTIA noted in its comments on the Spectrum Policy Task Force Report,⁴ continued reform of the Commission's spectrum policies is an essential step to ensure that the wireless industry has a predictable mechanism to meet the future demands of consumers for new, innovative wireless voice and data services. As part of this reform, CTIA generally supports the creation of some additional "commons" spectrum that is allocated for unlicensed use, provided there is a demonstrated need for such an allocation. In doing so, however, the Commission must also take steps to ensure that clear and precise rules and policies are in place to protect CMRS licensees from harmful interference that could undermine the efforts and resources expended by those licensees in bringing communications services to the American public.

I. The Licensed CMRS Industry Continues to Provide Innovative Products to Consumers at Fiercely Competitive Prices

CTIA agrees with the conclusions in the Working Paper that unlicensed wireless devices have "gained a foothold as an important use for spectrum," and that the Commission will have to study new spectrum management methods to accommodate the growth of these unlicensed devices.⁵ CTIA does not agree, however, with the contention that the Commission's current "exclusive use licensing structure represents an inefficient use of available spectrum,"⁶ which might imply that the Commission believes unlicensed

⁴ See Comments of the Cellular Telecommunications & Internet Association, ET Docket No. 02-135 (filed Jan. 27, 2003).

⁵ Working Paper 39, at 45.

⁶ *Id.* at 45, n. 88.

services and devices would somehow provide greater innovation than licensed CMRS devices.

As the Commission noted in its *Eighth Report* on CMRS competition, the CMRS industry is extremely competitive.⁷ In the *Eighth Report*, the Commission noted that 95 percent of the United States population lives in counties “with access to three or more different operators (cellular, broadband PCS, and/or digital SMR providers) offering mobile telephone service.”⁸ In addition, 83 percent of the U.S. population lives “in counties with five or more mobile telephone operators competing to offer service.”⁹ The intense competition in the CMRS market has also resulted in lower prices for consumers. As the *Eighth Report* notes, “the average price of mobile telephone service has declined during the year since the *Seventh Report*, continuing the trend of the last several years.”¹⁰

Furthermore, CTIA notes that this intense competition has already fostered many of the innovative products in the licensed CMRS market that the Working Paper envisions for unlicensed devices. For example, the *Eighth Report* notes that during the course of the last year, mobile carriers began offering an array of new services, “including downloadable ring tones and graphics, multimedia messaging services

⁷ See *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Eighth Report*, WT Docket No. 02-379, FCC 03-150 (rel. July 14, 2003) (hereinafter “Eighth Report”); see also *Music Giants Will Flock to Ring-Tone Market, Firm Says*, RCR WIRELESS NEWS, Aug. 4, 2003, at 21 (noting that the “worldwide ring-tone market totals an astounding \$4 billion”).

⁸ Eighth Report at ¶ 18.

⁹ *Id.*

¹⁰ *Id.*

(“MMS”), and interactive gaming.”¹¹ In addition, over the course of the last year, a number of U.S. wireless carriers have rolled out “camera phones,” which can be used for a variety of purposes from sending photographs of friends to other wireless users to preventing or documenting potential criminal activity.¹² It is likely that some of these innovative applications will also be utilized in unlicensed devices as the unlicensed segment of the market continues to grow. In adopting spectrum policies that adapt to this growth, however, CTIA reminds the Commission to remain mindful that, while unlicensed products are an important market segment, the applications they offer have limitations, as well as advantages, and they are only one part of the wireless landscape.

As it considers spectrum reform policies for the future, the Commission should bear in mind that carriers in licensed CMRS spectrum have a proven track record of innovation, service growth and spectrum efficiency that is not matched by any other wireless offering. The exclusive rights that flow with the grant of a license have afforded CMRS carriers the incentive and ability to serve more customers per megahertz than any other wireless service, with creative, reasonably priced services that attract more customers every day. While it is entirely appropriate for the Commission to consider new options for spectrum allocation, such as devoting spectrum to unlicensed uses, it should not lose sight of the fact that the success of *licensed* CMRS is a model that unquestionably works to promote innovation and creative new service offerings to a mass

¹¹ *Id.* at ¶ 19.

¹² See Mike Dano, *Camera Phones Click in U.S.*, RCR WIRELESS NEWS, Aug. 18, 2003, at 1 (noting that a “15-year-old New Jersey teen was approached by a man attempting to lure him into his car, but the teen was able to foil the apparent abduction attempt by snapping pictures of the man and his license plate using his Sprint PCS camera phone”).

market. In its quest to explore new spectrum approaches, the Commission should not forget the lessons of success.

II. “Underlay” Operations By Unlicensed Devices, Without Further Studies, May Cause Unacceptable Interference to Licensed CMRS Devices

The Working Paper, like the Spectrum Policy Task Force Report, delineates a number of policy changes that the Commission could implement to “create more spectrum opportunities for unlicensed devices,” including additional spectrum for unlicensed devices and use of the “interference temperature” concept to permit unlicensed devices to “underlay” the signals of licensed services.¹³ As noted previously, CTIA is generally supportive of the concept of allocating additional spectrum available for unlicensed devices, provided there is a demonstrated need and unlicensed operations gain no rights to protection from interference. The authorization of “underlay” operations in licensed spectrum, however, should be approached with extreme caution due to the potential for interference and the current lack of policies and standards to protect licensed devices from such interference.

While the Working Paper notes that “the FCC could allocate additional spectrum for unlicensed use through an overlay authorization,” the simple fact remains that the concept is still a long-term, theoretical mechanism that will require an immense amount of further empirical study and analytical work before its possible usefulness can be established.¹⁴ As the Spectrum Policy Task Force noted, the Commission will likely have to set different interference thresholds for “each band, geographic region, or

¹³ Working Paper 39, at 49.

¹⁴ *Id.*

service.”¹⁵ Furthermore, these estimated interference thresholds will be based on a myriad of factors, including “transmitter signal ranges, uniformity of signal levels over an area, the density of temperature measuring devices and the sharing of data taken by nearby devices.”¹⁶ The establishment of these appropriate interference thresholds will be an extremely time consuming and contentious process that will involve consultation by all parties. Unfortunately, the Working Paper provides no additional details regarding how this process should be carried out.

Furthermore, even if acceptable interference thresholds were adopted in certain bands, geographic regions or services, there would still be a need for constant monitoring to ensure that new unlicensed devices do not cause interference in certain situations. For example, if a large number of unlicensed devices quickly came into use in a compact, urban area, it is highly possible that these devices would degrade the service quality of licensed CMRS devices. In addition, the licensed CMRS provider would also be faced with the prospect of identifying the offending devices, and then requesting that the Commission take action against the unlicensed devices. Such a process would undoubtedly be lengthy, and would likely prevent licensed CMRS providers and customers from fully utilizing licensed spectrum. Accordingly, CTIA again urges the Commission to proceed down the “underlay” operations path very cautiously, and refrain from considering this concept until thorough studies can be completed and the details of developing a meaningful interference protection matrix can be adequately developed.

¹⁵ *Spectrum Policy Task Force Report*, ET Docket No. 02-135, at 28 (rel. Nov. 15, 2002).

¹⁶ *Id.*

III. The Commission's Current Efforts Should Focus on Completing Its Proceeding to Allocate Spectrum for Unlicensed Devices in the 5 GHz Band

Recently, the Commission initiated a proceeding to allocate additional spectrum for unlicensed uses in the 5 GHz band.¹⁷ CTIA believes that this proposal provides a positive solution to create additional unlicensed spectrum resources, and urges the Commission to focus its limited resources on this proceeding for two main reasons. First, this proposal will allow the Commission to deal with the issue of additional spectrum for unlicensed devices in a relatively expedient manner – unlike the “underlay” proposals, which will undoubtedly involve years of study to even determine an appropriate interference threshold matrix. Second, allocation of spectrum to unlicensed devices in the 5 GHz band may provide enough spectrum, at least in the near-term, for unlicensed devices, and make moot the need for plans that may cause interference to licensed CMRS devices.

¹⁷ See *Revisions to Parts 2 and 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band, Notice of Proposed Rulemaking*, ET Docket No. 03-122, RM-10371, FCC 03-110 (rel. June 4, 2003).

CONCLUSION

CTIA commends the Commission and the Joint OSP-OET Working Group for their continued efforts towards achieving spectrum reform. As this effort progresses, CTIA again urges the Commission to recognize that licensing of spectrum has a demonstrated track record of promoting innovation and services for consumers, and that additional spectrum made available to unlicensed devices should be offered in a manner that protects CMRS providers and users from interference.

Respectfully submitted,

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