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**ELECTRONIC FILING**

October 18, 2002

Marlene Dortch  
Office of the Secretary  
Federal Communications Commission  
445-12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Re: WT Docket No. 02-310 – Biennial Review 2002 Comments

Dear Ms. Dortch:

Attached please find Lucent's comments in connection with the Commission's request for comments in the Year 2002 Biennial Review dated September 26, 2002. In accordance with the Commission's rules, I am hereby filing a single electronic copy of these Comments.

Should you have any questions regarding this matter, please contact me at 703-925-4133.

Sincerely,

/s/ Gena L. Ashe  
Corporate Counsel

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

In the Matter of	)	
	)	
The 2002 Biennial Review of the	)	
Telecommunications Regulations Pursuant	)	WT Docket No. 02-310
to Section 11 of the Communications Act	)	
Of 1934	)	
	)	

**COMMENTS OF LUCENT TECHNOLOGIES INC.**

Lucent Technologies appreciates the opportunity to participate in the Commission's 2002 Biennial Review of its Rules and hereby files its Comments in the subject proceeding. Specifically, Lucent Technologies believes that further modification of Part 22 of the Commission's Rules is warranted for the reasons stated herein.

Lucent followed with interest the proceeding involved with the Year 2000 Biennial Regulatory Review (WT Docket No. 01-108). In that proceeding we were particularly concerned with the Rules associated with cellular and PCS emission limitations (§22.917, §24.238) and we believe the modifications described in the recently released Amendment to Part 22 of the Commission's Rules (FCC 02-229)<sup>1</sup> add both clarity and consistency. However, upon further detailed review of these Rules, Lucent believes that further change is warranted.

As the Commission knows, there is considerable use of spread spectrum systems in both the cellular and PCS bands. Moreover, the evolution to third generation systems will further enhance the growth of spread spectrum technology through the continued

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<sup>1</sup> See Year 2000 Biennial Regulatory Review – Amendment of Part 22 of the Commission's Rules to Modify or Eliminate Outdated Rules Affecting the Cellular Radio Telephone Service and Other Commercial Mobile Radio Services, WT-Docket No. 01-108, *Report and Order*, FCC 02-229 (rel. September 24, 2002).

deployment of CDMA2000 and the planned use of UMTS. Although both CDMA2000 and UMTS employ spread spectrum techniques, they are primarily distinguished by their respective carrier bandwidths. Specifically, the carrier bandwidth for CDMA2000 is 1.25 MHz; the carrier bandwidth for UMTS is 5 MHz.

It is Lucent's belief that the emissions from either CDMA2000 or UMTS spread spectrum systems into the 1 MHz bands immediately outside and adjacent to the frequency block will be of a similar continuous nature, and that the emission limitations should not, therefore, discriminate between these spread spectrum technologies. Lucent believes, however, that the rules describing the measurement procedure for emissions (§22.917 (b) and §24.238 (b)), as recently modified, will subject carriers that employ UMTS to more stringent requirements than carriers that deploy CDMA2000. The Rules related to measurement procedure presently state:

“...in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.”

Accordingly, consistent with the requirement that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$ , a CDMA2000 system would be allowed emissions of -13 dBm in a 12.5 kHz band (one percent of 1.25 MHz) within the 1 MHz band immediately adjacent to the frequency block, but a UMTS system would be required to meet the -13 dBm objective in 50 kHz (i.e., one percent of 5 MHz). This distinction reflects a requirement that is roughly 6 dB more stringent for UMTS emissions.

Because both systems should provide a similar type of interference to any victim system in the immediately adjacent 1 MHz, the emissions requirement should be the same, regardless of the type of spread spectrum technology. Moreover, because a resolution bandwidth of 12.5 kHz is presently allowed and is appropriate for the 1.25 MHz CDMA2000 system, it should be appropriate for the wider bandwidth UMTS system as well.

Consequently, the Rules related to measurement procedure (§22.917 (b) and §24.238 (b)) should be modified to read (in the second sentence)

“However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of either 12.5 kHz or one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.”

This proposed change will not affect narrow band systems such as TDMA and GSM. In the case of TDMA, one percent of the transmit carrier bandwidth would be 300 Hz, and in the case of GSM, one percent of the transmit carrier bandwidth would be 2 kHz; neither of which is affected by the revised statement.

Respectfully Submitted,

Lucent Technologies

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