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

In the Matter of

2000 Biennial Repulatory Review	)	
Spectrum Aggragation Limits for	)	WT Docket No. 01-14
Commercial Mobile Radio Services	)	
	)	
	)	
	)	

REPLY COMMENTS OF ARRAYCOMM, INC.

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1. INTRODUCTION AND INTEREST OF ARRAYCOMM, INC.

This proceeding is to determine whether the spectrum cap which limits cellular carriers to 45 MHz of spectrum ought to be relaxed or eliminated. When this issue was raised previously, the Commission determined that it was premature to determine how viable the PCS band would be in terms of creating competition to cellular. On that basis it decided to keep the "cap" in place and to revisit the matter in two years. That time has arrived, hence the issuance of this Docket.

Many of the Comments stressed that not only does adequate competition exist today, but any controversy that might exist about that adequacy can and should be dealt with under existing anti-trust law. Simply put, this is not a matter that warrants FCC involvement.

ArrayComm, Inc. (hereinafter, ArrayComm) has no opinion about whether existing laws are sufficient to determine the adequacy of competition in the rendition of common carrier wireless service.

ArrayComm is interested, however, in the contention of those seeking relief from the spectrum cap, that failure to be able to acquire additional spectrum will inhibit or preclude these carriers from meeting the public's need for "3G" services.

ArrayComm is a designer of systems that employ "smart" or adaptive antennas. There are in excess of 70,000 base stations throughout the world equipped with these antennas, resulting in systems which are substantially more spectrally efficient than those not so equipped. All cellular

technologies benefit from the use of smart antennas. Smart antennas increase the capacity of 2G and 3G cellular systems by a factor of from two to six depending on the technology, the degree of mobility and the propagation environment. In TDD systems, for which smart antennas offer the greatest capacity gains, operational capacity improvements of up to a factor of forty are being realized today. Employing both TDD and smart antennas, ArrayComm has developed a highly spectrally efficient wireless data system, i-BURST, for which it is seeking spectrum in ET Docket No. 00-221.

2. IMPACT OF "3G" ON SPECTRUM

Over the next decade, wireless services will be developed to meet consumer needs that are not only unsatisfied today but in some cases are unknown. At the outset, many "experts" regarded cellular as a mobile, vehicular, service. Now that portable use dominates, those users are eager for additional features and services that were beyond reasonable contemplation a few years ago. Thus, while there is no harm in assigning a generic term, "3G," for reference purposes to describe future services, the fact is that no one can foresee with any real accuracy what "3G" will encompass. Some describe "3G" as a data service as "2G" provided digital voice. Others contend that "3G" will only be an incremental step beyond "2G" (and "2.5G") And data, high speed data, will only emerge as part of "4G."

ArrayComm is convinced that there is/will be a market for data, but that many of the commercially important applications will necessitate data rates far higher than those proposed by carriers, would-be suppliers, and, specifically, well-above the rates ITU adopted for mobile "3G" services.

Will more spectrum be need in the future? Yes, but probably less than forecast. This is a good thing since the supply of new spectrum especially for mobile and portable applications, is not inexhaustible. The more pertinent question is: Will the spectrum be used well, i.e., wisely and efficiently? With the techniques available today, dramatic improvements are already possible, so the answer could be and should be "Yes.".

If today's carriers need cap relief to expand the flexibility of their present systems, fine, smart antennas can help. If today's carriers need cap relief to deploy new technology to meet future needs, fine, i-BURST and other innovative systems can help.

But if this relief is to enable today's carriers to effect mergers and to buy out competitors, thereby reducing the number of potential service providers who could furnish solutions to key segments of tomorrow's users, to homogenize technologies and to thwart innovation, ArrayComm would encourage the Commission and industry to choose a more enlightened path.