

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C.

In Re: )  
1392 -1395 and 1432 - 1435 MHz, ) Auction No. 46  
1390 - 1392 MHz, 1670 - 1675, and )  
2385 - 2390 MHz Band Auction )

To The Wireless Telecommunications Bureau

Comment of AeroAstro, Inc.

AeroAstro, Inc., (AeroAstro) by counsel, hereby files comments in the captioned auction. AeroAstro limits its comment to the simple statement that the multi-million dollar upfront payment and minimum opening bid for the license in the 1670.0 - 1675.0 MHz Band is an artificially high barrier to entry and may defeat the purpose of the auction by eliminating bidders. These amounts should be reduced to an upfront payment of \$1,263,000 with a \$2,526,000 minimum opening bid.

In adopting service rules for the slender 5 MHz of spectrum within the 1670 - 1675 MHz Band, the Commission repeatedly states that the spectrum should be used for the research and development of emerging new services.<sup>1</sup> AeroAstro is one of several commenters in the rulemaking proceeding who actively participated in the Commission's rulemaking regarding this band and is likely one of the few parties interested in this uncharted sliver of spectrum. In its Report and Order, the Commission specifically notes that three companies have expressed

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<sup>1</sup> *Amendments to Parts 1, 2, 27 and 90 of the Commission's Rules, Report and Order*, paragraph 29, WT Docket No. 02-8, FCC 02-152 (rel. May 24, 2002), *stating* that in this band the Commission seeks to "encourage the development and implementation of new and innovative services." *See also id.* At paragraph 21 *referring* to the Commission's goal of licensee flexibility in developing and providing new service, stimulating investment in new technologies and deployment of innovative communications.

interest in this spectrum for emerging uses of nascent technologies.<sup>2</sup> The Commission agrees with industry that the 1670 - 1675 MHz Band will be an incubator for new and innovative services. However, by setting the upfront payment and minimum opening bid for this spectrum at nearly \$13,000,000, the Bureau is unintentionally creating a barrier to access for the very entities which the Commission had hoped would maximize the use of this spectrum. The upfront payment and minimum bid amount for the 1670 - 1675 MHz Band must be significantly reduced.<sup>3</sup>

Enterprising bidders will show interest in the 1670 - 1675 MHz Band only if they fully are aware of the potential uses for and the actual value of the spectrum. Unchartered spectrum, particularly only 5 MHz of spectrum, limits the amount of interest which any business will express in that spectrum. For example, the unproven uses of General Wireless Communications Service (GWCS) continues to limit the investment that businesses will direct to that spectrum. In contrast, mature and well developed industries are fully aware of the value of their spectrum and willing to invest in such spectrum as the return on investment can be virtually immediate. In this example, one need look only to the 25 MHz (five times the amount of the single 1670 - 1675 MHz Band license) of cellular spectrum recently auctioned in Auction No. 45. The winning bidders in Auction 45 may immediately construct towers and use the spectrum with the knowledge that marketing, engineering and business studies and plan have been in existence with this spectrum for more than a decade. Such is not the case with the brand new 5 MHz of

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<sup>2</sup> Id. at fn. 74.

<sup>3</sup> AeroAstro notes that so long as the minimum opening bid is reduced to a level at which all eligible participants may enter the auction, market forces and competition will drive the ultimate winning bid for the spectrum to its optimal efficiency, even if that amount were to be above the instant \$12,628,000. In the event that the optimally efficient price for the spectrum is less than \$12,628,000, the auction can succeed only if the minimum opening bid is reduced to an amount below the current minimum amount; otherwise, no bidders will participate.

spectrum which is sandwiched between 1670 MHz and 1675 MHz.

AeroAstro refers the Bureau to Auction No. 41 for objective data regarding nationwide licenses. Although Auction No. 41 involved Narrowband PCS services - - an adolescent technology in comparison to the new 1670 - 1675 MHz technology - - it similarly involved a relatively small slice of spectrum auctioned on a nationwide basis.<sup>4</sup> Notably, all bidding for nationwide licenses ceased after only four rounds. Moreover, with one exception, the net bid amount on all of the licenses was less than the minimum opening bid due to bidding credits.<sup>5</sup> In that instance, the minimum opening bid was set a marginal price which was not rational to any participant other the ultimate winner of 7 licenses. The remaining eighth license was won in round 3 by another party. Auction 46 need not suffer from the same infirmities which created a barrier to entry in Auction 41.

To such end, AeroAstro recommends using a milli-cent and two factor in the upfront payment and minimum opening bid formulae, respectively, for the Nationwide licenses. This mirrors the rationally and well substantiated calculations used in Auction No. 41. As a result, the upfront payment should be calculated as  $\$ 0.001 * \text{MHz} * \text{License Area Population}$  and the minimum opening bid calculated at  $\$ 0.002 * \text{MHz} * \text{License Area Population}$ . As a result, the upfront payment would be \$1,263,000 with a \$2,526,000 minimum opening bid. This is supported both by the well reasoned methodology upon which the Bureau relied in Auction No.

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<sup>4</sup> AeroAstro also notes that the mere size of PCS, LMDS and cellular frequencies which range in size from 30 MHz to 10 paired MHz differentiates that spectrum from what is being offered in this auction, a scant 5 MHz of unpaired spectrum. The industry differences between the mature Broadband PCS/Cellular industries and the 1670 - 1675 MHz industry, discussed above, also render price comparisons incompatible.

<sup>5</sup> Only two of the eight nationwide licenses received bids higher than the minimum opening bid and of those two, only frequency block 23 received a net bid of more than the minimum opening bid.

41 and the ultimate results for nationwide licenses in Auction No. 41.

Further reviewing the results of Auction No. 41, the net high bid amounts on the eight licenses was \$ 4,637,250. This represented approximately 1.25 MHz of paired spectrum.

Weighting that functional value for an interpolation of the 1670 -1670 MHz Band, results in an ultimate value of \$18,549,000. An adjustment to this interpolated sum must be made in order to incorporate the premium paid in Auction 41 for paired spectrum versus the unpaired sliver of spectrum available in Auction 46. Assuming a 33% reduction for unpaired spectrum, the interpolated value is then calculated as \$12,366,000. There is no empirical data to support the adjustment which must be made in light of the nascent nature of this spectrum however it is unquestionable that this spectrum would suffer a downward adjustment due to its novel development. Regardless of this adjustment, setting the proposed minimum opening bid at 20% of the interpolated amount produces a \$2,473,000 minimum opening bid. A sum very close to the result of the 2 milli-cent factor proposed *supra* (that factor produces a \$ 2,526,000 opening bid).

Wherefore, having shown that 1) the 1670 - 1675 MHz band is designated by the Commission for new and innovative services (different from mature and more costly markets and services), 2) the auctioned spectrum is a mere 5 MHz of unpaired spectrum, 3) that a \$13,000,000 upfront payment and minimum opening bid would be prohibitively restrictive in achieving the Commission's goals of encouraging new service, and 4) that, based upon previous auction results, a one and two milli-cent monetary factor is appropriate in the formulae for upfront payments and minimum opening bids, respectively, AeroAstro respectfully submits that the Bureau should reduce the upfront payment to \$1,263,000 with a \$2,526,000 minimum opening bid.

Respectfully Submitted,  
Fletcher, Heald & Hildreth, P.L.C.

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