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June 6, 2002

**VIA ELECTRONIC FILING**

Thomas Sugrue  
Chief, Wireless Telecommunications Bureau  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

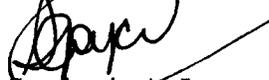
Re: Comments of ArrayComm, Inc., Report No. AUC-02-46-A, Auction No. 46,  
1392-1395 and 1432-1435 MHz, 1390-1392 MHz, 1670-1675 MHz, and  
2385-2390 MHz Bands Auction Scheduled for September 18, 2002

Dear Mr. Sugrue:

Enclosed for filing in the above-captioned docket please find the Comments of ArrayComm, Inc., submitted via electronic mail as requested in the Public Notice released May 24, 2002.

Please do not hesitate to contact me with any questions regarding this filing:  
202.955.9890.

Sincerely,



Stephanie A. Joyce

*Counsel to ArrayComm, Inc.*

Attachment

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

In the Matter of	)	
	)	Report No. AUC-02-46-A
1392-1395 and 1432-1435 MHz,	)	
1390-1392 MHz, 1670-1675 MHz,	)	Auction No. 46
and 2385-2390 MHz	)	
Bands Auction Scheduled for	)	
September 18, 2002	)	

To: The Wireless Telecommunications Bureau

**COMMENTS OF ARRAYCOMM, INC.**

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**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	
	)	Report No. AUC-02-46-A
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and 2385-2390 MHz	)	
Bands Auction Scheduled for	)	
September 18, 2002	)	

To: The Wireless Telecommunications Bureau

**COMMENTS OF ARRAYCOMM, INC.**

ArrayComm, Inc. (“ArrayComm”), by its attorneys, hereby submits these Comments in response to the Public Notice released by the Wireless Telecommunications Bureau (“Bureau”) in the above-captioned docket on May 24, 2002 (“*Auction 46 Public Notice*”).<sup>1</sup> In support of these Comments, the following is respectfully shown:

**I. Introduction**

**A. Scope of ArrayComm’s Comments**

Because ArrayComm’s interest in this auction lies with the 1670-1675 MHz band, these comments focus primarily on the auction rules under consideration for that band. In particular, ArrayComm confines its Comments to only five of the issues for which the Bureau seeks input: Round Structure, Upfront Payments, Activity Rules Waiver, adoption of a Minimum Opening Bid, and the proposed Bid Increment for the 1670-1675 MHz license. ArrayComm commends

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<sup>1</sup> *1392-1395 and 1432-1435 MHz, 1390-1392 MHz, 1670-1675 MHz, and 2385-2390 MHz Bands Auction Scheduled for September 18, 2002: Comment Sought on Reserve Prices or Minimum Opening Bids and Other Auction Procedural Issues*, Report No. AUC-02-46-A, Auction No. 46, Public Notice, DA 02-1257 (rel. May 24, 2002).

the Bureau for setting this spectrum, particularly the 1670-1675 MHz band, for bidding in Auction 46 in such an expedited manner.

### **B. About ArrayComm**

ArrayComm is a Silicon Valley-based technology house with plans to introduce innovative new technology into the wireless industry that will benefit consumers wishing to gain access to broadband Internet services. ArrayComm provided extensive comments in the Commission's proceedings to allocate and to set service rules for the 1670-1675 MHz unpaired band.<sup>2</sup> ArrayComm will participate in the auction for the 1670-1675 MHz license because this spectrum band is well suited for its i-BURST™ wireless Internet service, described in ArrayComm's previous comments on this spectrum.<sup>3</sup>

## **II. The Bureau Should Adopt Its Proposed Structure, Financial Investment and Activity Rules for This Auction**

The proposed structure for Auction 46 will ensure a fair and efficient auction. The Simultaneous Multiple Round (SMR) auction design, which will provide for the expeditious conclusion of the auction, is tempered by the Bureau's proposed activity rules waivers that will enable bidders to retain eligibility should their bidding activity decrease. In addition, the proposed upfront payment for the 1670-1675 MHz license indicates an initial valuation appropriate for a nationwide license, as would the adoption of a minimum opening bid. These rules should be adopted, in keeping with the goals of Section 309(j) of the Communications Act

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<sup>2</sup> ET Docket No. 00-221, RM-9267, RM-9692, RM-9797, RM-9854, Comments of ArrayComm, Inc. (filed Mar. 8, 2001) ("ArrayComm ET 00-221 Comments"); Reply Comments of ArrayComm, Inc. (filed Apr. 6, 2001) ("ArrayComm ET 00-221 Reply Comments"); WT Docket No. 02-08, Comments of ArrayComm, Inc. (filed Mar. 4, 2002) ("ArrayComm WT 02-08 Comments"); Reply Comments of ArrayComm, Inc. (filed Mar. 18, 2002) ("ArrayComm WT 02-08 Reply Comments").

<sup>3</sup> ArrayComm WT 02-08 Comments at 2-3.

of 1934: “promoting economic growth and enhancing access to telecommunications offerings for consumers.”<sup>4</sup>

**A. Simultaneous Multiple Round (SMR) Structure Is the Appropriate Auction Design**

The Bureau should utilize the simultaneous multiple round (SMR) structure for Auction 46.<sup>5</sup> As the Commission has determined, simultaneous bidding is more likely to award licenses efficiently, and eliminate the need to determine bidding sequences for multiple licenses.<sup>6</sup> In addition, simultaneous bidding is most efficient because it “mitigate[s] the effect of the winner’s curse.”<sup>7</sup> The Commission has also found this true of multiple round bidding, because this structure provides the greatest amount of bid status information, such that “sophisticated bidders will have less incentive to bid cautiously.”<sup>8</sup>

Thus, the SMR structure is most likely to result in efficient bidding, thereby awarding the license to the party with the greatest ability to bring innovative services to consumers. The Bureau should adopt its tentative conclusion to the use SMR structure for Auction 46.

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<sup>4</sup> *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, PP Docket No. 93-253, Second Report and Order, 9 FCC Rcd. 2348, 2349 (1994) (“*Section 309(j) Second Report and Order*”).

<sup>5</sup> *Auction 46 Public Notice* at 3.

<sup>6</sup> *Section 309(j) Second Report and Order*, 9 FCC Rcd. at 2363.

<sup>7</sup> *Id.* The “winner’s curse” refers to the phenomenon whereby one bidder overestimates the value of spectrum and thus places bids well above those of his competitors, resulting in an inflated winning bid. 9 FCC Rcd. at 2362.

<sup>8</sup> *Section 309(j) Second Report and Order*, 9 FCC Rcd. at 2362.

**B. The Proposed Upfront Payment Formula Is Appropriate for the 1670-1675 MHz Nationwide License**

The Bureau should adopt its proposed formula for figuring the upfront payment for the 1670-1675 MHz band.<sup>9</sup> ArrayComm believes that this formula results in an appropriate upfront payment given the nationwide scope of this license.

As the Commission has stated, upfront payments are designed “[t]o ensure that only serious, qualified bidders participate in [Bureau] auctions.”<sup>10</sup> Thus, they should reflect the utility of the spectrum being auctioned as well as the coverage of the license to be awarded. With regard to the 1670-1675 MHz band, commenters expressing interest in this spectrum have shown that it has many applications, including the i-BURST wireless Internet access service that ArrayComm is developing for this spectrum.<sup>11</sup> Moreover, each of these commenters has urged the Commission to grant this spectrum in its full 5 MHz block in a single nationwide license to ensure the maximum value of the spectrum;<sup>12</sup> having achieved this outcome, these parties should be prepared to invest an appropriate amount for the upfront payment.

Therefore, due to the import of this license in having nationwide coverage, the Bureau should adopt its proposed upfront payment for the 1670-1675 MHz license.

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<sup>9</sup> *Auction 46 Public Notice* at 3-4.

<sup>10</sup> *Section 309(j) Second Report and Order*, 9 FCC Rcd. at 2377.

<sup>11</sup> ArrayComm WT 02-08 Comments at 2-3. *See also* AeroAstro WT 02-08 Comments at 3-4 (describing its proposed Satellite Enabled Notification Service (SENS)); InsideTrax WT 02-08 Comments at 18 (describing its Personal Location and Monitoring Service (PLMS)).

<sup>12</sup> ArrayComm WT 02-08 Comments at 6-8; AeroAstro WT 02-08 Comments at 6; InsideTrax WT 02-08 Comments at 6.

**C. The Bureau’s Proposal to Grant Five Activity Rule Waivers Is Sufficient to Ensure a Fair Process While Not Impairing the Success of the Auction**

ArrayComm recognizes the need to impose minimum activity levels<sup>13</sup> on bidders to ensure that auctions “close within a reasonable period of time.”<sup>14</sup> The Bureau’s proposal to provide each bidder with five (5) activity rule waivers is nonetheless necessary to provide each participant with a fair opportunity to bid intelligently.<sup>15</sup> For example, the Milgrom-Wilson activity rules that provide the basis for the Commission’s auction framework included waivers to prevent a bidder’s losing eligibility “due to an accidental act or circumstances not under the bidder’s control.”<sup>16</sup>

In addition, these waivers will enable participants to review the bidding status and assess their capital position in order to make intelligent bids. As such, the Bureau will have better assurance that the auction winner is able to pay its winning bid in full. The Bureau should therefore adopt its proposal to extend five (5) automatic waivers to each bidder to be used at their discretion.

**D. The Bureau Should Adopt Its Tentative Conclusion to Use a Minimum Opening Bid for the 1670-1675 MHz License**

A minimum opening bid is the appropriate mechanism to ensure a reasonable return for the auction of the 1670-1675 MHz license.<sup>17</sup> As the Commission noted when fashioning the framework for spectrum auctions, minimum opening bids are the more desirable option where,

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<sup>13</sup> The Bureau proposes to impose the following activity rules: 80% in the First Stage, 90% in the Second Stage, and 98% in the Third Stage. *Auction 46 Public Notice* at 4-5.

<sup>14</sup> *Section 309(j) Second Report and Order*, 9 FCC Rcd. at 2371.

<sup>15</sup> *Auction 46 Public Notice* at 5.

<sup>16</sup> *Section 309(j) Second Report and Order*, 9 FCC Rcd. at 2372.

<sup>17</sup> *Auction 46 Public Notice* at 6-7.

as here, it is unsure “how many bidders are likely to bid in a particular auction.”<sup>18</sup> The Bureau thus has relied on minimum opening bids in several past auctions.<sup>19</sup>

The Bureau’s proposal to adopt the level of the minimum opening bid to mirror the upfront payment is a sound one.<sup>20</sup> As discussed above, the value of the 1670-1675 MHz block warrants that the Bureau take steps to permit “only serious, qualified bidders” to compete for this license. The proposed minimum opening bid is also important to ensuring a successful outcome overall for the auction, as Section 309(j) requires.<sup>21</sup>

### **III. The Bureau Should Adopt a Decreased Bid Increment, Effective When Only Two Bidders Remain Eligible, In Order to Ensure an Efficient Outcome for the Auction of the 1670-1675 MHz Band**

Developing a formula for determining bid increments provides the uniformity and predictability to the bidding process that are necessary to construct an efficient auction.<sup>22</sup> ArrayComm believes that the formula proposed for Auction 46 is an appropriate device for encouraging thoughtful, efficient bidding.<sup>23</sup> ArrayComm proposes, however, a slight alteration of the proposed formula with respect to the 1670-1675 MHz license.

Although it is proper to maintain a minimum percent increment of 10 percent when bidding is strong early in the auction, maintaining a high minimum increment late in the auction allows for the possibility of an inefficient outcome. Specifically, use of a percent increment that

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<sup>18</sup> *Section 309(j) Second Report and Order*, 9 FCC Rcd. at 2384.

<sup>19</sup> *See Auction 46 Public Notice* at 6 n.19.

<sup>20</sup> *See Auction 46 Public Notice* at 7.

<sup>21</sup> Auctions must be designed to ensure the “development and rapid deployment of new technologies, products, and services,” while “promoting economic opportunity and competition.” 47 U.S.C. § 309(j)(3).

<sup>22</sup> *Section 309(j) Second Report and Order*, 9 FCC Rcd. at 2369.

<sup>23</sup> *Auction 46 Public Notice* at 8-9.

cannot fall below 10 percent,<sup>24</sup> is inefficient when only two bidders remain eligible. Put differently, a 10 percent bid increment may result in one party's winning despite the fact that the other party actually assigned higher value – and would have paid a higher price – for the spectrum. This outcome becomes more likely as the license price rises, because a constant percent increment leads to a larger dollar bid increment. This problem is best explained through a few examples:

**Scenario 1 – Consistent Bid Increment, Two Eligible Bidders**

Standing High Bid: \$29 million (Bidder A)

Bid Increment: 10%

Next Required Bid:  $\$29 \text{ million} * 1.10 = \$31.9 \text{ million}$

Bidder A values the spectrum at \$30 million

Bidder B values the spectrum at \$31 million

Bidder A wins for a price of \$29 million

**Scenario 2 – Decreased Bid Increment, Two Eligible Bidders**

Standing High Bid: \$29 million (Bidder A)

Bid Increment: 5%

Next Required Bid:  $\$29 \text{ million} * 1.05 = \$30.45 \text{ million}$

Bidder B bids \$30.45 million

Bidder A valued the spectrum at \$30 million and drops out

Bidder B wins for a price of \$30.45 million

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<sup>24</sup> *Auction 46 Public Notice* at 8.

From these examples it is apparent that a smaller bid increment in a two-bidder scenario will achieve an outcome that more closely realizes the parties' relative valuations for the spectrum. In addition, the final price is \$1.45 million higher under that scenario. Rather than decrease the overall success of the auction, a smaller bid increment actually provides a greater net gain, while ensuring that the party assigning higher value to the license is more likely to win it. Thus, allowing the minimum percent increment to fall below 10 percent in the final stages of the auction reduces the chance of inefficiency, and increases the expected proceeds from the auction. Finally, as a substantive matter, ArrayComm notes that the 5% bid increment proposed in Scenario 2 above reflects the Commission's "preferred basic minimum bid increment" of 5 percent set in its initial auction rulemaking.<sup>25</sup> ArrayComm proposes that the Bureau adopt a 5 percent bid increment, at the maximum, that will apply to the 1670-1675 MHz license when only two bidders remain.

The Commission's rules provide the Bureau the flexibility and authority to alter the bid increment during the course of an auction,<sup>26</sup> and in prior auctions the Commission has allowed the minimum percent increment to fall below 10 percent as the auction winds down. Such action would be particularly appropriate in the case of the 1670-1675 MHz, which entails a nationwide license.<sup>27</sup> In addition, as the comments in Wireless Docket 02-08 indicate,<sup>28</sup> the auction for this

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<sup>25</sup> *Section 309(j) Second Report and Order*, 9 FCC Rcd. at 2369.

<sup>26</sup> *Compare Section 309(j) Second Report and Order*, 9 FCC Rcd. at 2369 (Commission retains discretion to alter bid increment over the course of the auction), *with Amendment of Part 1 of the Commission's Rules – Competitive Bidding Proceeding*, WT Docket No. 97-82, Order, Memorandum Opinion and Order, and Notice of Proposed Rule Making, 12 FCC Rcd. 5686, 5697 (1997) (clarifying that the Chief of the Wireless Telecommunications Bureau may implement the Commission's auction rules by delegated authority).

<sup>27</sup> As noted in Section I, *supra*, ArrayComm focuses its comments on the proposed rules as they would affect the 1670-1675 MHz band license. It notes, however, that its comments, particularly its proposed change to the bid increment, apply equally to the 2385-2390 MHz, which also will be awarded in a single nationwide license.

license is likely to have only a few participants, making it likely that a two-bidder scenario will occur. ArrayComm urges the Bureau to consider adopting a smaller minimum percentage bid increment for the two available nationwide licenses that will govern in the event that bidding is left to two final participants. Indeed, this altered bid increment mechanism may be appropriate for all licenses in this auction should the Bureau make that determination in its discretion.

#### **IV. Conclusion**

ArrayComm applauds the Bureau for persevering in bringing the 1670-1675 MHz band to auction on an expedited basis. It encourages the Bureau to adopt the SMR auction structure, with activity rule waivers afforded to participants, in order to create an auction that is both expeditious and fair. ArrayComm also finds that the proposed upfront payment and minimum opening bid scheme are appropriate to ensure thoughtful participation. Finally, ArrayComm believes that the Bureau should adopt its proposed bid increment in a slightly modified form, specifically for the nationwide 1670-1675 MHz license, which would apply in a two-bidder scenario, in order to ensure an efficient outcome for the auction.

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<sup>28</sup> See generally ArrayComm WT 02-08 Comments, AeroAstro WT 02-08 Comments, and InsideTrax WT 02-08 Comments.

Respectfully submitted,

**ARRAYCOMM, INC.**

By:



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June 6, 2002

CERTIFICATE OF SERVICE

I, Stephanie A. Joyce, certify that on this 6th day of June, 2002, a true and correct copy of the foregoing Comments of ArrayComm, Inc. were served First Class Mail or electronic mail\* on the following persons:

  
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