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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

March 4, 2002

VIA COURIER

William F. Caton
Acting Secretary
Federal Communications Commission
236 Massachusetts Avenue, N.E., Suite 110
Washington, D.C. 20002

02-81

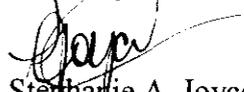
Re: Comment filing, WT Docket No. ~~02-024~~ *Reallocation of the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands*

Dear Mr. Caton:

Enclosed for filing please find an original plus four (4) copies of the Comments of ArrayComm, Inc. in the above-captioned docket. Also enclosed please find one copy of the Comments marked "Stamp In." Kindly date-stamp this document and return it to me in the enclosed self-addressed envelope.

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

Sincerely,



Stephanie A. Joyce
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Enclosures

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Before the
FEDERAL COMMUNICATIONS COMMISSION
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MAR - 4 2002

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
) WT Docket No. 02-08
Reallocation of the 216-220 MHz,)
1390-1395 MHz, 1427-1429 MHz,) RM-9267
1429-1432 MHz, 1432-1435 MHz,) RM-9692
1670-1675 MHz, and 2385-2390 MHz) RM-9797
Government Transfer Bands) RM-9854
) RM-9882

To: The Commission

COMMENTS OF ARRAYCOMM, INC.

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SUMMARY

ArrayComm, Inc. (“ArrayComm”), by its attorneys, hereby submits these Comments in response to the Notice of Proposed Rulemaking in WT Docket No. 02-08. ArrayComm congratulates the Commission for its efficiency in releasing the *Reallocation NPRM*. ArrayComm is a Silicon Valley-based technology house with plans to introduce innovative new technology, *i-BURST™*, that will bring consumers wireless broadband Internet access. ArrayComm’s technology includes a wide-area portable broadband Internet solution and an IP-optimized radio interface. This state-of-the-art technology is based upon ArrayComm’s IntelliCell® technology, currently deployed in over 90,000 base stations in Japan, China and Taiwan, and delivers as much as 1 megabit per second (“Mbps”) of throughput to each end user, with 20 Mbps of aggregate per-cell throughput in 5 MHz.

ArrayComm strongly supports the majority of the Commission’s tentative conclusions and proposals for the 1670-1675 MHz band because the proposed regime would ensure the efficient and complete use of the spectrum by allowing the licensee the maximum flexibility in its use. ArrayComm urges the Commission to adopt its proposed rules for authorizing the 1670-1675 MHz band in a single nationwide license. Nationwide licensing will encourage investment, provide consumers with ubiquitous service, and serve Congress’s mandate in Section 309(j) of the Act that the Commission promote the deployment of innovative technologies using reallocated spectrum.

ArrayComm also supports the Commission’s proposals to apply Part 27 of the Commission’s Rules to the 1670-1675 MHz band. Application of Part 27, rather than the less flexible Part 101, will provide licensees of this spectrum a streamlined regulatory regime that will foster new entry and the provision of innovative services to end users.

The Commission has also correctly reasoned that licenses in the 1670-1675 MHz band should be granted as a 5MHz block. As the Commission has noted, not only is division of the 5 MHz block infeasible, it would render each sub-block financially unviable.

Band managers are unnecessary for the 1670-1675 MHz band and would likely hinder users’ ability to achieve service ubiquity. The assignment of band managers would discourage new entry and the provision of innovative services, because it could result in the division of spectrum on a regional basis. Even if the Commission adopted service rules to restrict a band manager’s administration of the spectrum, band managers would impose unnecessary complexity and could jeopardize service ubiquity such that they would not serve the public interest.

The Commission should adopt its proposed application, ownership and license term rules for the 1670-1675 MHz band. ArrayComm supports the Commission’s tentative decision to permit both commercial and private use of this spectrum because permitting licensees the flexibility to choose the services that they deliver based on market opportunity will best encourage the efficient and complete use of this spectrum. The Commission should also provide broad applicant eligibility subject to Congress’s clear foreign ownership restrictions in Section 310 of the Communications Act. Further, the Commission should adopt its proposed 10-year license term with a renewal expectancy contingent upon provision of substantial service because

such a renewal expectancy will provide a stable regulatory environment that will be attractive to investors, thereby encouraging new entry and investment in services on this band.

ArrayComm agrees that geographic partitioning and spectrum disaggregation are in the public interest and should be permitted in the 1670-1675 MHz band. ArrayComm believes that this proposal could serve the public interest, as it grants licensees further flexibility in the use of the spectrum, which is in keeping with the Commission's general goal in this band. ArrayComm emphasizes, however, that its foremost concern in this proceeding is that the Commission adopt the single nationwide licensing scheme proposed in the Reallocation Notice of Proposed Rulemaking. Nonetheless, ArrayComm acknowledges that partitioning and disaggregation of this spectrum may encourage the efficient use of this spectrum and is therefore in the public interest.

ArrayComm also recommends that the Commission forbear from applying historical Title II regulatory requirements on innovative services provided in the 1670-1675 MHz band. The nascent and highly specialized nature of the services to be provided over this spectrum requires little active Commission regulatory oversight.

The Commission should apply the substantial service test for reviewing licensee operating performance in the 1670-1675 MHz band. The substantial service test is the appropriate tool for this purpose, because, as is also true in the renewal expectancy context, it best ensures that the spectrum awarded by the Commission is in fact used to bring innovative services to end users.

ArrayComm supports the Commission's general proposal to apply its Part 27 rules to the 1670-1675 MHz band as described above. In the *Reallocation Notice of Proposed Rulemaking*, the Commission also proposed to apply certain technical provisions of Part 27 to this band. ArrayComm supports the application of those provisions with the following two exceptions. First, with regard to routine environmental evaluations, commercial operations in the 1670-1675 MHz band should be subject to the same trigger levels for such evaluations as Broadband PCS. Second, it is not clear that the provisions of Section 27.63 of the Commission's rules should apply to operations in the instant band. If the original motivation for these provisions is specific to WCS equipment operating at 2.3 GHz or 750 MHz, then the coordination requirements should not apply to operations in the 1670-1675 MHz band.

With respect to emissions limits, ArrayComm proposes that in-band emissions limits be specified in consideration of RF safety and coordination at the license boundary, while out-of-band emissions limits be independently specified in consideration of the protection requirements of adjacent band systems. This approach will result in maximum flexibility for commercial operations in the band, while guaranteeing protection of adjacent band services. It will allow operators to determine the tools that they will use in meeting adjacent-band protection requirements without restricting their in-band prerogatives. The sensitivities of adjacent band radiosonde and radioastronomy operations are so extreme, however, that site-by-site protection requirements must be adopted to protect them. No commercially reasonable general out-of-band emissions limit, *e.g.*, as used to protect Broadband PCS systems from one another, will protect radiosonde and radioastronomy operations. As importantly, the Commission must specify which

sites for these services are to be protected, or at least with whom the operator must coordinate, and to what level.

ArrayComm proposes in-band emissions limits of 2 kW EIRP for fixed stations and 4 W EIRP for mobile stations, midway between the emissions limits of the Broadband PCS and WCS rules. ArrayComm's proposal for general out-of-band emissions limitations is the " $43+10\log_{10}P-10\log_{10}M$ " criterion that the Commission proposes in the Notice of Proposed Rulemaking. This is the same criterion adopted in the Broadband PCS and WCS rules, revised to account for the behavior of adaptive antenna systems.

The Commission seeks comment on its interim proposal to adopt the same in-band emissions requirements at the Mexican and Canadian borders with the United States as it does for borders between geographic service areas. Assuming that a field strength limit is adopted, ArrayComm supports this proposal. With regard to coordination with incumbent government operations, as the Commission noted, site-by-site coordination for spectrum licensed on a geographic area basis would be neither efficient nor feasible. For that reason, subject to the appropriate predefined coordination procedures, geographic area licensees should be responsible for determining whether a change to their deployment necessitates a coordination procedure. To that end ArrayComm asks that the Commission identify, well in advance of the auction, the entities with whom licensees must coordinate, in order that participants may understand the parameters under which their service must work.

Finally, the Commission should adopt its proposed bidding credits for small business applicants in the 1670-1675 MHz band because those credits will ensure that new companies have a meaningful opportunity to compete for licenses in the 1670-1675 MHz band. Although ArrayComm strongly supports the use of spectrum for public safety purposes, these applications are not subject to competitive bidding under Section 1.2101(b) of the Commission's rules.

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

In the Matter of)	
)	WT Docket No. 02-08
Reallocation of the 216-220 MHz,)	RM-9267
1390-1395 MHz, 1427-1429 MHz,)	RM-9692
1429-1432 MHz, 1432-1435 MHz,)	RM-9797
1670-1675 MHz, and 2385-2390 MHz)	RM-9854
Government Transfer Bands)	RM-9882

To: The Commission

COMMENTS OF ARRAYCOMM, INC.

ArrayComm, Inc. (“ArrayComm”), by its attorneys, hereby submits these Comments in response to the Notice of Proposed Rulemaking in the above-captioned docket released by the Federal Communications Commission (“FCC” or “Commission”) on February 6, 2002 (“*Reallocation NPRM*”).¹ In support of these Comments, the following is respectfully shown:

I. Introduction

ArrayComm congratulates the Commission for its speed and efficiency in releasing the *Reallocation NPRM*. The Commission has completed the Herculean task of marshalling several blocks of spectrum, comprising 27 megahertz, in a single rulemaking proceeding only one month after authorizing this spectrum.² This effort epitomizes Congress’s goal of encouraging “the

¹ *Reallocation of the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands*, WT Docket No. 02-08, Notice of Proposed Rulemaking, FCC 02-15 (rel. Feb. 6, 2002). This notice was published in the Federal Register on February 15, 2002 at 67 FR 7113.

² *Reallocation of the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands*, ET Docket No. 00-221, RM-9267, RM-9692, RM-9797, RM-9854, Report and Order and Memorandum Opinion and Order, FCC 01-382 (rel. Jan. 2, 2002) (“*Reallocation Order*”).

most efficient use” of spectrum in order to spur “rapid deployment” of innovative wireless services.³

A. Scope of ArrayComm’s Comments

Although these Comments may have general applicability to the entire proceeding, ArrayComm’s interest in this proceeding lies with the 1670-1675 MHz band allocation. As such, ArrayComm’s focus in these Comments relates exclusively to the rules that would be applicable to the 1670-1675 MHz band.

B. About ArrayComm

ArrayComm is a small, 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 participated in the Commission’s consideration of the allocation of the 1670-1675 MHz unpaired band seeking the efficient and timely allocation of this spectrum.⁴ ArrayComm anticipates applying for the 1670-1675 MHz license because this spectrum band is well suited for its *i-BURST*TM wireless Internet service.

i-BURST is a wide-area portable broadband Internet solution that combines the spectral efficiency of ArrayComm’s IntelliCell[®] technology with an IP-optimized radio interface and a unique IP-centric architecture. IntelliCell is a state-of-the-art adaptive, or “smart,” antenna technology. IntelliCell is currently deployed in over 90,000 base stations for a variety of air interfaces in countries including Japan, China and Taiwan.

³ *Omnibus Budget Reconciliation Act*, H.R. Rep. No. 103-111, 103rd Congress, 1st Sess. at 576, 573 (1993) (“*House Report*”).

⁴ 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”).

i-BURST enables large-scale, high-speed wireless Internet networks to be deployed and maintained at significantly lower cost than today's cellular data solutions and the 3G solutions anticipated in the future. *i-BURST* has been optimized to operate over one or more unpaired bands of radio spectrum using time division duplexing ("TDD") transmission technology and delivers as much as 1 megabit per second ("Mbps") of throughput to each end user, with 20 Mbps of aggregate per-cell throughput in 5 MHz.

C. ArrayComm Strongly Supports the Commission's Tentative Conclusion to Issue a Nationwide License in the 1670-1675 MHz Band

ArrayComm strongly supports almost all of the Commission's tentative conclusions and proposals for 1670-1675 MHz band. The Commission's proposed regulatory regime would ensure the most efficient and complete use of spectrum, because it allows the licensee the maximum flexibility in its use. ArrayComm believes that the *Reallocation NPRM* strikes a necessary and appropriate balance between Commission oversight and carrier flexibility that will result in the efficient use of the 1670-1675 MHz band as Congress intended.

ArrayComm urges the Commission to adopt its proposed rules with respect to authorizing the 1670-1675 MHz band in a single nationwide license. A single nationwide license is pivotal to ArrayComm's intended use of the spectrum. In addition, others indicating their interest in this band have also requested that the Commission authorize the spectrum on a single-block nationwide basis.

ArrayComm supports the Commission's proposals to apply Part 27 to the 1670-1675 MHz band, to allow the flexible use of spectrum for commercial and private services, and to provide broad applicant eligibility. ArrayComm does not, however, support the concept of a band manager in the 1670-1675 MHz band because that construct is unnecessary for a single nationwide license. Moreover, ArrayComm and others, having invested in the development of

new and innovative technology, may find it difficult to implement their networks and services under a band manager. For example, the investment community may be reluctant to invest in providers when the license necessary to provide services is held by a third party with investors that have business goals of their own, or if the band manager is not technology neutral.

ArrayComm also supports the Commission's tentative conclusion to forbear from regulating 1670-1675 MHz licensees, as it has done for other CMRS licenses, but urges the Commission to go further in adopting full forbearance of Title II regulations in this band.

Finally, ArrayComm urges the Commission to adopt technical rules that will permit maximum flexibility to operators in this band while ensuring adequate protection against harmful emissions. Specifically, the Commission should determine in-band emissions in consideration of RF safety and coordination at license boundaries, while out-of-band emissions limits should be independently specified in consideration of the protection requirements of adjacent band systems. This approach will allow operators to determine the tools that they will use in meeting adjacent-band protection requirements without restricting their in-band prerogatives. In addition, as to coordination, the Commission should identify all entities given protected status as soon as possible, in order that applicants can properly assess their ability to provide service in this band.

II. The Commission Should Adopt Its Proposed Licensing Plan For The 1670-1675 MHz Band

A. Application of the More Flexible Part 27 Rules Will Foster the Commission's Goal of Encouraging Innovative Services in the 1670-1675 MHz Band

The Commission seeks comment on whether its Part 27 rules should apply to the bidding and licensing procedures for the 1670-1675 MHz band.⁵ ArrayComm believes that application of Part 27 will provide licensees of this spectrum a streamlined regulatory regime that will foster

⁵ *Reallocation NPRM* ¶¶ 16-18.

new entry and the provision of innovative services to end users. ArrayComm therefore recommends that the Commission apply Part 27, rather than the less flexible Part 101, to the 1670-1675 MHz band.

Part 27 was established in 1997 pursuant to Congress's grant of authority to the Commission in Section 303 of the Act⁶ to permit flexible use of spectrum.⁷ Section 303, as the Commission has explained, permits flexible use of spectrum where such use is in the public interest, would not deter investment in services, and would not cause harmful interference to other spectrum users.⁸ In the *Part 27 Order*, the Commission recognized that streamlined licensing requirements were appropriate for new spectrum in order to provide the most efficient, most expeditious use of that spectrum.⁹

That approach is fully warranted here. The services that ArrayComm and others seek to provide over the 1670-1675 MHz band are innovative and will provide an important competitive choice in services – notably Internet access services – in keeping with the Commission's goal of deriving maximum value from the public radio spectrum. As such, this band does not require the more extensive regulatory oversight that Part 101 provides. Rather, the Commission should choose to apply its Part 27 regime, which will impose a significantly lower regulatory burden on the new entrants that seek to use the 1670-1675 MHz while providing maximum flexibility of service.

⁶ 47 U.S.C. § 303, as amended by the Omnibus Consolidated Appropriations Act, Pub. L. No. 104-208, 110 Stat. 3009 (1996).

⁷ *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service*, GN Docket No. 96-228, Report and Order, FCC 97-250, 12 FCC Rcd. 10785 (1997) (allocating spectrum at 2305-2310 MHz, 2310-2320 MHz and 2345-2360 MHz for fixed, mobile, radiolocation and broadcasting-satellite (DARS) services) ("*Part 27 Order*").

⁸ See 47 U.S.C. § 303(y)(2).

⁹ *Part 27 Order*, 12 FCC Rcd at 10789.

B. The Commission is Correct That a Nationwide Geographic License in the 1670-1675 MHz Band Is Crucial for Ubiquitous Provision of Innovative Wireless Services

The Commission has tentatively concluded that the license in the 1670-1675 MHz band should be granted on a nationwide basis.¹⁰ ArrayComm strongly supports this conclusion, as it has consistently explained that nationwide licensing will encourage investment,¹¹ provide consumers with ubiquitous service, and is necessary to comport with Congress's mandate in Section 309(j) of the Act that the Commission promote the deployment of innovative technologies using reallocated spectrum.¹²

Nationwide licenses are particularly necessary for the services proposed for the 1670-1675 MHz band. Indeed, as the Commission notes, the three parties providing comment on reallocation of this spectrum all agree that nationwide licensing is in the public interest.¹³ This unanimity is not mere coincidence.

As the Commission has recognized,¹⁴ nationwide licenses are crucial to the financial viability of providers who wish to deploy new and innovative services, and this is particularly true in the 1670-1675 MHz band. Specifically, as explained in the February 2001 study by John Haring and Jeffrey H. Rohlf's,¹⁵ submitted by ArrayComm earlier in the allocation proceeding, the economic demands of launching service at 1670-1675 MHz, coupled with the market realities

¹⁰ *Reallocation NPRM* ¶ 33.

¹¹ ArrayComm ET 00-221 Comments at 50.

¹² ET Docket No. 00-221, RM-9267, RM-9692, RM-9797, RM-9854, ArrayComm Supplemental Comments at 4-6 (filed July 13, 2001).

¹³ *Reallocation NPRM* ¶ 32 (citing ArrayComm ET 00-221 Comments at 50-51, AeroAstro ET 00-221 Comments at 7, MicroTrax ET 00-221 Comments at 12).

¹⁴ *Reallocation NPRM* ¶ 30.

¹⁵ John Haring and Jeffrey H. Rohlf's, *Economic Need for a National License in the 1670-1675 MHz Band* (Feb. 16, 2001) (attached to ArrayComm ET 00-221 Comments as Appendix A) (hereinafter "*Economic Need for a National License*").

of this early post-monopoly period, require that new entrants immediately obtain the ability to achieve service ubiquity. This study shows that the types of specialized services that commenters propose for this band require significant expenditure for equipment deployment, business development and advertising; “[f]or these reasons, regional (or *a fortiori*, local) licenses may have virtually no value[.]”¹⁶

Moreover, as stated in *Economic Need for a National License*, the “copycat” phenomenon of service duplication, as well as the constant threat of market leverage by regional incumbent local exchange carriers (“ILECs”), put a premium on a licensee’s ability to claim nationwide ubiquity for its service.¹⁷ As such, if ArrayComm or others seek to bring new and innovative services to the public utilizing the 1670-1675 MHz band, it is an absolute imperative that these new service providers be given the opportunity to deploy on a nationwide basis. For these reasons, ArrayComm supports the Commission’s tentative conclusion that the licenses for the 1670-1675 MHz band be granted on a nationwide basis.

C. The Commission Has Correctly Reasoned That Licenses in the 1670-1675 MHz Band Should Be Granted as a 5 MHz Block

The Commission proposes in the *Reallocation NPRM* to license the 1670-1675 MHz band as a single 5 MHz block.¹⁸ ArrayComm urges the Commission to adopt that proposal, for both technical and economic reasons. For, as the Commission has noted, not only is division of the 5 MHz block infeasible, it would render each sub-block financially unviable.¹⁹ Indeed, the record overwhelmingly demonstrates that block licenses are crucial for this band.

¹⁶ *Economic Need for a National License* at 2.

¹⁷ *Economic Need for a National License* at 3-6.

¹⁸ *Reallocation NPRM* ¶ 35.

¹⁹ *Id.*

As ArrayComm explained in its initial reallocation comments, a 5-MHz block is “close to the minimum amount” of spectrum that can support a viable new broadband service.²⁰ Subdivision of the band would not only reduce the frequency extent of each licensee’s block, in all likelihood it would also necessitate the introduction of guardbands within each block to ensure coexistence, further reducing the useable spectrum available to the operator. Simply put, based on ArrayComm’s understanding of the positions of the parties that have demonstrated an interest in the 1670-1675 MHz band, no party believes that band is viable unless it is licensed as a single block.

The only other commenters on the instant spectrum have indicated that their applications require 5 MHz for technical and economic viability.²¹ Based on the record, therefore, subdividing the band would undoubtedly discourage the new entry and investment in this band that Congress intended to encourage. Therefore, the Commission should not divide the 1670-1675 MHz band into sub-blocks, but rather should license the spectrum as a single block in furtherance of the public interest.

D. Band Managers are Unnecessary for the 1670-1675 MHz Band and Could Hinder Users’ Ability to Achieve Service Ubiquity

The *Reallocation NPRM* seeks comment on whether application of traditional band manager licensing policies to the 1670-1675 MHz band is appropriate.²² ArrayComm believes that band managers are not only unnecessary, but also potentially counterproductive.²³ The Commission has stated its intent to provide nationwide licenses in this band in order to

²⁰ ArrayComm ET 00-221 Comments at 49.

²¹ AeroAstro ET 00-221 Comments at 6; MicroTrax ET 00-221 Comments at 25.

²² *Reallocation NPRM* ¶ 40.

²³ ArrayComm is particularly concerned about the assignment of band managers to the extent that the manager might not be technology-neutral in terms of the type of services and equipment that sublicensees may use over the allotted spectrum.

encourage new entry and the provision of innovative services.²⁴ The assignment of band managers would run contrary to that intent, as it could well result in the division of spectrum on a regional basis. Even were the Commission to adopt service rules to restrict a band manager's administration of the spectrum,²⁵ band managers would impose unnecessary complexity and could jeopardize service ubiquity such that they would not serve the public interest.

The Commission has recognized that assignment of band managers is not always appropriate.²⁶ For example, band managers may cause additional interference, loss of spectrum efficiency and, as a result, decreased quality of service.²⁷ Moreover, reliance on band managers would likely result in the piecemeal sublicensing of 1670-1675 MHz band spectrum, militating against the nationwide footprint that the Commission seeks to achieve.²⁸ Applying such a scheme to the 1670-1675 MHz band would discourage the investment community from funding applicants and new licenses, because a third-party band manager, rather than the service provider, would actually hold the license.

In essence, band managers would add another layer of complexity to the licensing process, and could thwart service ubiquity, in a manner that would not encourage new entry or spawn innovative services. Band managers are appropriate and effective only for spectrum bands likely to be used by multiple service providers providing a variety of services. Under a nationwide licensing scheme, as both the Commission and commenters have proposed, there

²⁴ *Reallocation NPRM* ¶ 33.

²⁵ *Reallocation NPRM* ¶ 39.

²⁶ *Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended*, WT Docket No. 99-87, Report and Order and Further Notice of Proposed Rulemaking, FCC 00-403, 15 FCC Rcd. 22709, 22728 (2000) (“*BBA Report and Order*”).

²⁷ *BBA Report and Order*, 15 FCC Rcd. at 22733.

²⁸ *See Reallocation NPRM* ¶ 33.

would be no need for a band manager. A single nationwide licensee in the 1670-1675 MHz band therefore does not require band management.

For these reasons, the assignment of band managers in the 1670-1675 MHz is not in the public interest.

III. The Commission Should Adopt Its Proposed Application, Ownership And License Term Rules For The 1670-1675 MHz Band

A. ArrayComm Supports the Commission’s Tentative Decision to Permit Both Commercial and Private Use of this Spectrum

The Commission has tentatively concluded that the most efficient and administrable use of the 1670-1675 MHz band will occur if the licensee is permitted to operate on both a commercial (CMRS) and a private (PMRS) basis.²⁹ Under this regime, carriers could seek one or both of the CMRS and PMRS statuses for a single license, thus enabling them to serve a wide array of customers and avoiding the need to define their scope of service prior to becoming operational.³⁰ ArrayComm supports this conclusion, because permitting licensees the flexibility to choose the services that they will deliver, and thereby determine their regulatory status, based on market opportunity will best encourage the efficient and complete use of this spectrum.

The Commission’s proposed rule advances the public interest in ensuring that spectrum is used to its maximum reach and capability. It will allow carriers to serve as many customers as possible, without being restricted by an artificial distinction specified in its initial license application of “common carrier” or “private.”³¹ Indeed, the Commission adopted this flexible

²⁹ *Reallocation NPRM* ¶ 78.

³⁰ *Id.*

³¹ ArrayComm also proposes that, although some licensees may act principally or solely as common carriers, the Commission should forbear from regulating licensees under historical Title II common carrier regulations. *See* Section III.E., *infra*.

regime five years ago for Local Multipoint Distribution Service (“LMDS”) services.³² The Commission noted then that licensees need “the flexibility to design their service offering in response to market demand.”³³ This reasoning is equally sound in this proceeding, where service providers must continually stay ahead of market developments and seek the widest possible subscription of services. The Commission should therefore adopt its proposed rule granting flexible regulatory status.

B. The Commission Should Provide Broad Applicant Eligibility Subject to Congress’s Clear Foreign Ownership Restrictions in Section 310 of the Act

The Commission proposes not to impose any license eligibility requirements other than the foreign ownership restrictions provided in Section 310 of the Act, 47 U.S.C. § 310.³⁴ The Commission states that it seeks to “open[] this spectrum to as wide a range of applicants as possible” in order to “encourage entrepreneurial efforts to develop new technologies and services[.]”³⁵ ArrayComm agrees that eligibility for the 1670-1675 MHz band should be as broad as possible, subject to the restrictions of Section 310.

Eligibility restrictions are a useful tool for ensuring that spectrum does not become concentrated in the hands of incumbent monopolists.³⁶ Further, such restrictions prevent the use

³² *Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission’s Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, CC Docket No. 92-297, Second Report and Order, FCC 97-82, 12 FCC Rcd. 12545, 12636-38 (1997) (“*LMDS Second Report and Order*”).

³³ *LMDS Second Report and Order*, 12 FCC Rcd. at 12636.

³⁴ *Reallocation NPRM* ¶¶ 81, 83.

³⁵ *Reallocation NPRM* ¶ 81.

³⁶ Eligibility restrictions may also be required, explicitly or impliedly, by statute. *See, e.g., LMDS Second Report and Order*, 12 FCC Rcd. at 12609 (finding that there is no statutory prohibition on an incumbent LEC obtaining an LMDS license). Nothing in the Communications Act or related legislation, however, includes such a proviso for the 1670-1675 MHz band.

of newly-authorized spectrum as a means of leveraging a monopoly into a competitive market.³⁷ In the instant case, however, the proposed use of the 1670-1675 MHz band has applications that would not compete directly with such entities or, if so, has not been sought after by those monopolist entities. Open licensing eligibility is thus in the public interest of encouraging new entry and investment³⁸ while bearing little risk of monopolistic abuse.³⁹

The Commission's foreign ownership restrictions, however, should remain intact for this spectrum. As the Commission explains, its rules implementing Section 310 of the Act impose foreign ownership restrictions on licensees, with more onerous restrictions applied to licensees providing common carrier services.⁴⁰ This construct is appropriate for the forthcoming licenses in the 1670-1675 MHz band. The Commission should therefore adopt its tentative conclusion that it should apply only the foreign ownership restrictions on license eligibility.

C. The Commission Should Adopt Its Proposed 10-Year License Term With Renewal Expectancy Contingent Upon Provision of Substantial Service

The *Reallocation NPRM* proposes to grant licenses in the 1670-1675 MHz band for a period of 10 years with a renewal expectancy similar to that afforded to PCS carriers.⁴¹ The

³⁷ For example, the Commission excluded incumbent LECs, such as BellSouth, from obtaining certain LMDS licenses for three years on the grounds that they could use the spectrum to thwart new entrants attempting to provide competitive services. *LMDS Second Report and Order*, 12 FCC Rcd. at 12616-17.

³⁸ Congress's intent in requiring the reallocation and licensing of new radio spectrum holds a clear public interest purpose: "The Commission is required to adopt bidding methodologies that promote rapid deployment of advanced services to all the people of the United States, including those in rural areas; provide opportunities for small businesses, and prevent the selling of licenses for unjust enrichment." *House Report*, 103rd Cong., 1st Sess. at 246.

³⁹ The Commission adopted a similarly broad eligibility approach in the *Part 27 Order*, reasoning that "opening the [wireless communications system] market to a wide range of applicants will permit and encourage entrepreneurial efforts to develop new technologies and services." *Part 27 Order*, 12 FCC Rcd. at 10829.

⁴⁰ *Reallocation NPRM* ¶ 81 (citing 47 C.F.R. § 27.12).

⁴¹ *Reallocation NPRM* ¶ 86.

Commission further seeks comment on the standard to apply to this renewal expectancy: either (i) the “substantial service” test;⁴² or (ii) a “build-out requirement.”⁴³ ArrayComm suggests that a 10-year license with a substantial service renewal expectancy is the appropriate licensing regime for the 1670-1675 MHz band. As the Commission notes, this renewal expectancy construct, coupled with 10-year licenses, will provide “a stable regulatory environment that will be attractive to investors,” thereby encouraging new entry and investment in services on this band. This licensing construct is, as recognized in the *Reallocation NPRM*,⁴⁴ in keeping with consistent Commission policy in several other proceedings.⁴⁵

ArrayComm recognizes the Commission’s mandate to “prevent stockpiling or warehousing of spectrum by licensees or permittees.”⁴⁶ Imposing a substantial service threshold for renewal expectancy adheres to that mandate, because it ensures that licensees are actually building and serving end users with new, innovative services. The substantial service threshold is not so high, however, as to place unreasonable or onerous deployment schedules on what will largely be new entrants offering innovative services. This standard, as defined by the Commission, has a commercially meaningful application – requiring provision of more than “mediocre” or “minimal” service – that achieves its requisite goal of fostering a competitive services market.

⁴² Substantial service is defined as “service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal.” *E.g.*, 47 C.F.R. § 22.940(a)(1)(i) (substantial service test applied to cellular comparative renewal proceedings).

⁴³ *Reallocation NPRM* ¶ 94.

⁴⁴ *Id.* ¶ 86.

⁴⁵ *See, e.g., Part 27 Order*, 12 FCC Rcd. at 10840 (“The WCS license terms will be 10 years, with a renewal expectancy similar to that afforded PCS and cellular licensees.”).

⁴⁶ *House Report*, 103rd Cong., 1st Sess. at 256.

Adoption of a substantial service standard for renewal expectancy is therefore more in keeping with the public interest and should be adopted.

D. ArrayComm Agrees That Geographic Partitioning and Spectrum Disaggregation Are in the Public Interest and Should Be Permitted in the 1670-1675 MHz Band

The Commission seeks comment on its proposal to permit geographic partitioning and spectrum disaggregation in the 1670-1675 MHz band.⁴⁷ ArrayComm believes that this proposal could serve the public interest, as it grants licensees further flexibility in use of the spectrum, which is in keeping with the Commission's general goal in this band.⁴⁸ ArrayComm emphasizes, however, that its foremost concern in this proceeding is that the Commission adopt the single nationwide licensing scheme proposed in the *Reallocation NPRM*. Nonetheless, ArrayComm acknowledges that in the future, due to technological advances, partitioning and disaggregation of this spectrum may encourage new and efficient uses of this spectrum (*e.g.*, by assisting in the rapid build-out of a ubiquitous nationwide 1670-1675 MHz *i-BURST* network) and is therefore in the public interest.

The Commission has adopted geographic partitioning and spectrum disaggregation for wireless services in order to provide "desirable flexibility to determine the amount of spectrum they will occupy and the geographic area they will serve."⁴⁹ It has applied this policy historically to CMRS licenses as well as to personal communications services ("PCS")

⁴⁷ *Reallocation NPRM* ¶¶ 89-90.

⁴⁸ *See, e.g., Reallocation NPRM* ¶ 16 ("[W]e seek to develop service rules that are not based on a Commission prediction of how these bands may ultimately be used, but instead reflect a record that enables us to establish maximum practicable flexibility.").

⁴⁹ *Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Service Licensees*, WT Docket No. 96-148, Report and Order, FCC 96-474, 11 FCC Rcd. 21831, 21833 (1996) ("*Partitioning and Disaggregation Order*").

licenses.⁵⁰ This policy is equally beneficial to licenses in the 1670-1675 MHz band, in order to permit maximum usage of the available spectrum and encourage new market entry. Moreover, it empowers the licensee to determine how best to utilize the allocated spectrum – a result entirely in keeping with the scheme of nationwide licenses that is crucial for the 1670-1675 MHz band.

ArrayComm therefore believes that partitioning and disaggregation within the 1670-1675 MHz band are in the public interest. It supports the Commission’s tentative conclusion on this matter, insofar as it will not militate against its primary goal of achieving a nationwide license, and thus national service ubiquity, for this spectrum.

E. The Commission Should Forbear from Applying Historical Title II Regulatory Requirements on Innovative Services Provided in the 1670-1675 MHz Band

The Commission also seeks comment on whether it should, consistent with its policies with respect to CMRS providers generally, forbear from applying historical Title II common carrier regulations on entities licensed in the 1670-1675 MHz band.⁵¹ These regulations include tariffing, ratesetting, interconnection, and contract filing under Sections 203, 204, 205, 211 and 212 of the Act.⁵² ArrayComm urges the Commission to apply forbearance in this proceeding, as

⁵⁰ *Id.* at 11833.

⁵¹ *Reallocation NPRM* ¶ 96.

⁵² ArrayComm notes that these and other Title II provisions may not apply in the first instance, as it will provide data-centric services rather than traditional circuit-switched wireless voice services. *Cf. Personal Communications Industry Association’s Broadband Personal Communications Services Alliance’s Petition for Forbearance for Broadband Personal Communications Services*, WT Docket No. 98-100, Memorandum Opinion and Order, FCC 98-134, 13 FCC Rcd. 16857, 16861 (1998) (“*PCIA Forbearance Order*”) (declining to forbear from applying Sections 1 and 2 of the Act to broadband PCS carriers whose service is “a replacement for land line telephone exchange service”); *Forbearance from Applying Provisions of the Communications Act to Wireless Telecommunications Carriers*, WT Docket No. 98-100, FCC 00-311, 15 FCC Rcd. 17414, 17420 (2000) (“*CMRS Forbearance Order*”) (establishing forbearance for CMRS providers largely comprising wireless voice service providers). ArrayComm nonetheless supports full forbearance for this spectrum, regardless of its use, because of the strongly competitive characteristics of broadband wireless services generally.

the nascent and highly specialized nature of the services to be provided over this spectrum require little active Commission regulatory oversight.

Section 10 of the Communications Act, as amended, 47 U.S.C. § 160, provides that “the Commission shall forbear from applying any regulation or any provision of the Act to a telecommunications carrier” where the Commission finds that such enforcement is not necessary to ensure just and reasonable terms and conditions of service or to protect consumers, and that forbearance from enforcement is in the public interest.⁵³ As the *Reallocation NPRM* notes, the Commission has already decided to forbear from regulating CMRS providers under Sections 203, 204, 205, 211 and 212 of the Act under this test.⁵⁴ The notice also states that the Commission has forbore from applying Section 203 tariffing requirements for competitive LECs and competitive access providers under its permissive tariffing regime.⁵⁵ ArrayComm submits that these approaches are appropriate for the 1670-1675 MHz band, and further suggests that forbearance from applying the nondiscrimination requirements of Sections 201 and 202 should also be adopted for this spectrum.

ArrayComm recognizes that the Commission declined to forbear from applying Section 201 and 202 regulations for CMRS and PCS services. These decisions rested on the market conditions for these services, which did not “ensure that the charges, practices, classifications

⁵³ 47 U.S.C. § 160(a). ArrayComm notes that Section 332 of the Act provides similar forbearance authority specific to mobile services, but that the Commission historically has relied upon Section 10 in the context of wireless service regulation as “there is no decisionally significant distinction between the substantive standards for forbearance set out in Section 10 and in Section 332(c)(1)(A).” *CMRS Forbearance Order*, 15 FCC Rcd. at 17420.

⁵⁴ *Reallocation NPRM* ¶ 96.

⁵⁵ *Id.*

and regulations” warranted Commission forbearance.⁵⁶ For example, the Commission found that in the broadband PCS market “the competitive development of the industry . . . is not yet complete and continues to require monitoring.”⁵⁷ Thus, this market did not exhibit the requisite vigorous competition required for a showing of public interest.

The instant case does not exhibit the same market conditions as the broadband PCS market. The uses ArrayComm proposes for the 1670-1675 MHz band, *i-BURST* services, would involve a non-voice offering in the increasingly competitive environment of wireless Internet access service.⁵⁸ Or, what is more compelling, parties like ArrayComm will likely utilize this spectrum in part for services with public safety applications, whose core purpose is the public interest. These facts show that the potential for use of this band in a manner harmful to consumers is unlikely, such that enforcement of Sections 201 and 202 for these services is unnecessary. Indeed, enforcement of these regulations is precluded if its principal result would be to discourage investment and deployment of new services.⁵⁹

ArrayComm therefore urges the Commission not to apply traditional Title II common carrier regulations to the innovative, nascent services proposed for the 1670-1675 MHz band. At the least, the Commission should adopt its prior CMRS approach with respect to forbearance from enforcement of Sections 203, 204, 205, 211 and 212 of the Act. ArrayComm further

⁵⁶ *PCIA Forbearance Order*, 13 FCC Rcd. at 16866.

⁵⁷ *Id.*, 13 FCC Rcd. at 16870.

⁵⁸ This market is so competitive, in fact, that the Commission is considering whether to deregulate broadband Internet access services provided by incumbent LEC monopolists. *See generally Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services*, CC Docket No. 01-337, Notice of Proposed Rulemaking, FCC 01-360 (rel. Dec. 20, 2001).

⁵⁹ *See* 47 U.S.C. § 160(a).

submits, however, that complete forbearance, including Sections 201 and 202, is warranted in these unique circumstances.

IV. The Commission Should Apply the Substantial Service Test for Reviewing Licensee Operating Performance in the 1670-1675 MHz Band

The *Reallocation NPRM* requests comment on whether the Commission should review licensee performance under the substantial service test or a “construction requirement” in order “to ensure that spectrum is used effectively and service is implemented promptly.”⁶⁰ The substantial service test is the appropriate tool for this purpose, because, as is also true in the renewal expectancy context,⁶¹ it best ensures that the spectrum awarded by the Commission is in fact used to bring innovative services to end users.

The substantial service test requires that licensees actually provide service to end users “which is sound, favorable, and substantially above a level of mediocre service.”⁶² Thus, applying this test on review of licensees’ use of the 1670-1675 MHz spectrum focuses on the net benefit to American consumers. Such review directly furthers Congress’s goal in authorizing the FCC to license new spectrum, namely to ensure that licensees “efficiently utilize[] the spectrum for the benefit of the public.”⁶³ This aim is particularly relevant to the high-speed data transmission services that ArrayComm will bring to the public over its *i-BURST* network.⁶⁴

For these same reasons, the construction test is not the appropriate framework for reviewing licensee operational performance. This test focuses on whether a licensee “reaches,”

⁶⁰ *Reallocation NPRM* ¶ 94.

⁶¹ See Section III.C, *supra*.

⁶² *Reallocation NPRM* ¶ 94.

⁶³ *House Report*, 103rd Cong., 1st Sess. at 246.

⁶⁴ “The Commission is required to adopt bidding methodologies that promote rapid deployment of advanced services to all the people of the United States[.]” *House Report*, 103rd Cong., 1st Sess. at 246.

or passes, a certain proportion of the relevant population⁶⁵ but does not ask whether the licensee is actually serving any end user. Although it does establish a bright-line standard for performance review, it is less likely to ensure that the public truly benefits from the Commission's awarding the spectrum. For example, having population-based coverage requirements during the term of the initial license could restrict a licensee's flexibility to roll-out new services or networks as consumer requirements change, which they often do. In such a case, instead of developing services or enabling new networks, the licensee would be forced to build its original network and offer its original services to meet the mid-term population-based construction requirements.

ArrayComm strongly recommends that the Commission adopt the substantial service test for licensee performance because it will better ensure that the public derives a direct benefit from the authorized spectrum, in keeping with Congress's mandates, and will provide the licensee with the flexibility needed to satisfy the ever-changing service demands of the public.

V. Technical Rules

As an initial matter, ArrayComm urges the Commission to adopt and release its final technical rules well in advance of the auction, in order that potential applicants can seek accurate valuation of the spectrum. Absent a reliable valuation, applicants could be hindered in obtaining financing for the auction.

Many of the technical issues in this proceeding relate to the apparently competing requirements of, on the one hand, in-band emissions rules that enable a wide range of flexible and commercially valuable uses for the spectrum, and, on the other hand, out-of-band emissions rules and protection requirements that adequately safeguard critical government and scientific

⁶⁵ See *Reallocation NPRM* ¶ 94.