Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands	)	WT Docket No. 03-66 RM-10586
	)	
Part 1 of the Commission's Rules - Further Competitive Bidding Procedures	)	WT Docket No. 03-67
	)	
Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and the Instructional Television Fixed Service Amendment of Parts 21 and 74 to Engage in Fixed Two-Way Transmissions	)	MM Docket No. 97-217
	)	
Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico	)	WT Docket No. 02-68 RM-9718
	)	
Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets	)	WT Docket No. 00-230

Comments of The ITFS/2.5 GHz Mobile Wireless Engineering & Development Alliance, Inc. ("IMWED")

The ITFS/2.5 GHz Mobile Wireless Engineering & Development Alliance, Inc. ("IMWED") hereby submits these comments in response to the Commission's Further Notice of Proposed Rulemaking ("FNPRM") in the above captioned matter ("EBS/BRS Report and Order").[1]

[1] *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, Report and Order ("*R&O*") and Further Notice of Proposed Rulemaking ("*FNPRM*"), FCC 04-135 (rel. July 29, 2004), 19 FCC Rcd 14165 (2004).

I. About IMWED.

IMWED was formed in 2003. Currently, it is composed of six organizations that are licensed to operate ITFS systems scores of communities nationwide, ranging in size from Chicago to Kona, Hawaii.[2] It is a non-profit organization intended to provide member licensees with technical and business assistance needed to convert their systems successfully to digital two-way mobile operation.

Specifically, IMWED's corporate purposes are: 1) to assist ITFS and other 2.5 GHz licensees in spectrum planning and technical coordination, including, without limitation, providing technical assistance and information to ITFS licensees; 2) to facilitate the successful conversion of ITFS and other 2.5 GHz band spectrum to two-way mobile digital use in a manner that fosters the long-term viability and independence of ITFS licensees; 3) to encourage the development of new technology that enables new and expanded educational uses of 2.5 GHz spectrum; and 4) to facilitate and encourage the entry of new competitors and new technology into the wireless broadband industry in the 2.5 GHz band.

IMWED members deliver a wide variety of ITFS services. For instance, North American Catholic Educational Programming Foundation produces original instructional programming in many academic subject areas, and it also grants to county and state correctional facilities reading/phonics courses to address high inmate illiteracy rates. Through its ITFS service, Instructional Telecommunications Foundation helps elementary and secondary schools to build libraries of instructional videos in wide array

[2] The members of IMWED are: Chicago Instructional Technology Foundation ("CITF"), Denver Area Educational Telecommunications Consortium ("DAETC"), Instructional Telecommunications Foundation ("ITF"), North American Catholic Educational Programming Foundation ("NACEPF"), Portland Regional Educational Telecommunications Corporation ("PRETC"), and Twin Cities Schools' Telecommunications Group ("TCSTG").

of school subjects. In addition to both public and private schools, DAETC provides video service to juvenile detention facilities in the Denver area, and CITF delivers video service not only to schools but also to Chicago's Children's Memorial Hospital and five community churches.

IMWED's members have experience in secondary market transactions involving excess ITFS capacity for both video and data uses. They have been parties to excess capacity agreements with subsidiaries of a variety of well-known firms, including Sprint, BellSouth, WorldCom, Nucentrix, and Clearwire.

IMWED member organizations are looking forward to expanding their educational service to include data service (including mobile data service) for students, teachers, and educational institutions.

II. Transitions to the New Band Plan When No Proponent Files a Timely Initiation Plan.

A. Timely Transitions Will Not Occur Within the Next Three Years Due to Shortcomings in the Commission's Rules.

In the EBS/BRS Report and Order, the Commission established a firm goal of effecting transitions nationwide within three years.[3] However, the Commission has at the same time created significant obstacles to transitions.[4] First, it erected unnecessarily high economic barriers by requiring that markets be transitioned by Major Economic Area (MEA),[5] and by allowing latecomers to launch service without reimbursing any of a proponent's costs. Second, its rules allow the launching of two-way data services *without* a transition, thus giving prospective proponents every incentive to evade what the Commission has made an overly expensive process. It is clear to IMWED that, given

[3] EBS/BRS Report and Order, paragraph 83.
[4] These obstacles are described in detail in IMWED's Petition for Reconsideration in the above-captioned proceeding, January 10, 2005, pp. 3-6.
[5] *Id*., paragraphs 72, 86.

these circumstances, the Commission should not expect a significant number of MEAs to transition within the next three years.

A. The Commission's Proposals Concerning Transition to a New Band Plan When No Proponent Files a Timely Initiation Plan Are Unacceptable.

In the FNPRM, the Commission proposes to confiscate and auction spectrum that is not well along in the transition process within three years.[6] In exchange for the seized spectrum, licensees would receive "transferable bidding credits" usable in the 2.5 GHz auction or another Commission auction.[7]

In the FNPRM text, the Commission seeks to "illustrate that incumbents need be no worse off under this proposal than they would be under an Initiation Plan."[8] IMWED takes exception to this conclusion in the strongest terms. EBS licensees serve local areas, and their bidding credits would be based upon GSA (e.g. local) populations served. The Commission proposes to auction large regional areas---MEAs---with correspondingly large populations.[9] It is unlikely that EBS licensees will see a purpose in acquiring MEA-wide spectrum, and is also unlikely that their bidding credits will give them the wherewithal to do so. This is a prescription for the extirpation of the EBS service. Ironically, the proposed process punishes EBS licensees for the failure to carry out transitions when the Commission has adopted rules that make it impractical for them (and all other prospective proponents) to do so.

B. If the Commission Requires That All Markets Be Transitioned by a Given Date, It Should Give Licensees the Option to Self-Transition in Lieu of Having Their Spectrum Put Up for Auction.

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6 As described in the above section, IMWED anticipates that the bulk of 2.5 GHz spectrum (if not all of it) will remain untransitioned at the end of three years. .

7 EBS/BRS Report and Order, paragraph 290.

8 *Id*. at paragraph 292.

9 *Id*. at paragraph 310.

There are three chief aspects to carrying out a transition: 1) giving each existing channel group a single MBS channel; 2) shutting down the remaining high power channels allotted to each channel group, and 3) replacing the downconverters at existing EBS receive sites with high performance models.

EBS licensees can accomplish the first two steps by themselves at moderate cost. In the case of current C and D group licensees, generally the first step will be a matter of operating one existing transmitter from its current channel assignment. In the case of other EBS licensees, this will entail retuning one existing transmitter to the appropriate MBS channel. Essentially no cost will be entailed in the second step, as it entails only turning off existing transmitters.

With these two simple steps, the band will be rendered fallow for two-way low-power digital development on a nationwide basis. There is no need for the third step---downconverter replacement---until two-way operation commences in the vicinity of the pertinent EBS receive sites. It would be the responsibility of the operator providing two-way service to replace downconverters before it launches service that could cause interference. This sequencing of obligations allows advanced wireless operators to phase in replacements, thereby deferring unnecessary costs and lowering the barriers to investment.[10]

This is a far simpler system for preparing the spectrum than the Commission's proposed forced march to auction, and it is a system that will preserve EBS service, a

[10] It is only fair that the Commission require that latecomers who provide two-way service in the same geographic area reimburse the entity which replaced downconverters for a pro-rata share the out-of-pocket replacement costs.

goal that the Commission specifically acknowledged in its decision.[11] Accordingly, IMWED strongly urges the Commission to give EBS licensees the option of self-transitioning---by taking steps 1) and 2) above at their own expense---in lieu of having their GSA spectrum put up for auction.

III. EBS Performance Requirements.

a. Benchmarks Based Solely on Population Served or Geography Are Ill-Suited to the EBS Service.

EBS is a service that traditionally has been directed chiefly at students studying for credit at accredited educational institutions, where students often, but not always, are reached in classrooms.[12] Because there are many types of EBS licensees, and because their educational services vary, there is no common principle that establishes how many locations a given licensee should serve, or how many individuals should be reached. For instance, certain graduate-level engineering courses may serve only a dozen students at a handful of industrial sites, yet be exceedingly important educationally.

Further, with the advent of advance data services to EBS, traditional patterns may turn out not to apply in the future. .

Accordingly, as the Commission correctly notes, common wireless performance requirements---generally based upon build-out as measured by population or geography reached---are inapposite for EBS.[13] However, despite the great variety of EBS licensees, and EBS educational service, the Commission indicated that it wants to measure

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[11] "[T]he public interest favors preserving this spectrum for licensing to ITFS-eligible entities and that doing so will further the educational objectives that led to the establishment of ITFS. The record demonstrates that the EBS service provides critical educational services…" [EBS/BRS Report and Order, paragraph 152.]

[12] This service orientation was formerly was long reflected in Part 74 of the Commission's Rules, and it is now lodged at Section 27.1203.

[13] EBS/BRS Report and Order, paragraph 323.

performance by "safe harbors" of general applicability, rather than case-by-case analysis.[14]

B. EBS Safe Harbors Should be Based Upon Traditional Measures of Educational Service or Upon Commercial Leasing for Advanced Wireless Networks.

IMWED recommends two safe harbors.

Safe Harbor #1. The first safe harbor is descended from the educational requirements the Commission has long imposed on the ITFS service, and carried over to apply to EBS.[15] Because these requirements are general in character, we feel that they are appropriate for standards that will need to be applied to licensees operating in a wide variety of circumstances. Specifically, an EBS licensee should be considered to be providing substantial service with respect to all its channels in a given geographic area if: (a) it is using its spectrum (or spectrum to which the licensee's educational services are shifted) to provide educational services within the licensee's GSA; (b) the services provided by the licensee are being used to serve the educational mission of one or more accredited public or private schools, colleges or universities providing formal educational and cultural development to enrolled students; and (c) the level of service provided by the licensee meets or exceeds the usage requirements specified in the Commission's Rules.

Safe Harbor #2. The second safe harbor is based upon the incipient new era of EBS service in which an EBS licensee may be lease its spectrum to expand the capacity of a commercial advanced wireless network. Thus, in situations where an EBS licensee leases its spectrum for commercial services and is otherwise in compliance with the Commission's rules (including the EBS programming requirements in Section 27.1203),

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[14] *Id*.

[15] IMWED thus answers in the affirmative as to whether licensees' existing benchmarks, if met, should be an available method of demonstrating substantial service. See the EBS/BRS Report and Order, paragraph 328.

the licensee should be considered to be providing substantial service with respect to its all channels in a given geographic area (even if certain channels are not leased and/or certain channels are not actually used by the commercial system at the time of renewal) if the Commission finds that the wireless system operated by the commercial lessee is providing substantial service pursuant to the criteria applicable to commercial service providers.

C. An EBS System Should be Presumed to Be in a Safe Harbor for the Period Beginning with the Effective Date of the EBS/BRS Report and Order and Ending Five Years Following the Transition of the System's Market.

As the Commission noted in the EBS/BRS Report and Order:

> As part of the fundamental changes to the BRS and EBS band, we seek to encourage BRS and EBS licensees to respond to market demands for next generation ubiquitous broadband wireless services and make investments in the future of such services. We believe this goal cannot be readily accomplished if BRS and EBS licensees have to focus their resources on preserving legacy services solely because renewal approaches and licensees fear losing their authorizations if the discontinuance of service and forfeiture rules are not eliminated. Furthermore, the move to next generation services for BRS and EBS providers also entails a transition period where licensees will be forced to go dark and discontinue service during the actual transition. Accordingly, we conclude that it would be inappropriate to penalize BRS and EBS licensees while they migrate to the new band plan.[16]

IMWED agrees with the Commission's views with respect to the changes coming to the EBS band, and the implications. We thus believe that an EBS system should be presumed to be in a safe harbor for the period beginning with the effective date of the EBS/BRS Report and Order and ending five years following the date on which the system's market has been transitioned.

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[16] EBS/BRS Report and Order, paragraph 323.

IV. New EBS Licenses to Be Assigned by Auction.

A. White Space Auctions Should be Conducted by BTA.

EBS is typically local in character. Accordingly, the areas where EBS systems need interference protection are generally local, and adjacent to their existing service areas. In a companion Petition for Reconsideration, IMWED has recommended that market transitions be effected BTA by BTA.[17] We thus recommend that "white space" auctions be carried out according to the same, comparatively small, geographic unit.

B. White Space Auctions Should Be Conducted by EBS Channel Group; High Power and Low Power Spectrum in Each Channel Group Should Be Auctioned Separately.

IMWED anticipates that EBS licensees are likely to want to acquire spectrum in white spaces to expand their existing base of service. Since, overwhelmingly, EBS licensees hold channels within existing channel groups, this is the logical basis for auctioning white spaces. Under the new band plan, there is, for the first time, to be a distinction between low power spectrum (in the EBS or UBS) and high power spectrum (in the MBS). It is possible that an EBS licensee thus would want to expand either its advanced wireless service, its video-based service, or both. Under these conditions, it would be best for the Commission to auction separately the fourth (MBS) channel from the first three in a given channel group, which will be located in either the UBS or MBS. For example, if the Commission were to auction the D channel white space in a given BTA, IMWED recommends that one auction be held for channels D-1, D-2, and D-3 (in the LBS), and another be held for channel D-4 (in the MBS).

C. EBS White Space Should Not Be Auctioned Unless There Is More Than One Application for the Same Spectrum.

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[17] IMWED Petition for Reconsideration, January 10, 2005, p. 3.

Section 309(j)(1) of the Communications Act states, in pertinent part,

> If… *mutually exclusive applications are accepted* for any initial license or construction permit, then, except [for exempt classes of licenses], the Commission shall grant the license or permit to a qualified applicant through a system of competitive bidding...[18] [Emphasis added.]

IMWED expects that in some instances there will be only one application for EBS white space in a given BTA, or whatever geographic unit the Commission selects as the basis for auctions. In the event that only one entity submits an application which the Commission accepts for filing, and which the Commission finds in the public interest to approve, such an application should be granted without competitive bidding (and, indeed, it is axiomatic that with a single applicant there would be no bidding contest in any event).

D. Commercial Entities Should Not Be Allowed to Fund EBS Spectrum Bids.

As the Commission noted in the EBS/BRS Report and Order:

> …ITFS is the only spectrum specifically reserved for educators. In an open market, we are concerned that educators could not effectively compete against broader commercial interests. Indeed… the inability to bid against commercial operators for this spectrum would effectively deny educators any future entry strategy into the band.[19]

The Commission needs to recognize that because of excess capacity considerations, ITFS spectrum auctions are likely to become contests not between licensees, but between their commercial lessees. While eligibility restrictions prohibit commercial entities from bidding for EBS white space, unless there is a parallel prohibition, they can be the real party in interest behind non-profit entities' bids. Presumably, the way this will work is that a commercial operator will enter into a long-

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[18] 47 USC 309(j)(1).

[19] EBS/BRS Report and Order, paragraph 159. While this quotation concerns the issue license eligibility, it is no less apposite to that of spectrum auctions.

term excess capacity lease with an eligible entity, as well as the right to acquire the spectrum if the rules change, in exchange for funding a spectrum bid. Thus while the commercial firm will not be able to hold a license to this spectrum itself---at least so long as current eligibility restrictions remain in place---it will exercise complete control over who wins a license, who has access to the resulting excess capacity, and what the lease terms are, because it can "shop" all EBS-eligible entities in the entire country until it finds one that will accept its proffered terms

The most discordant result will occur when one EBS bidder is backed by a for-profit lessee, while its purely educational competitor attempts to secure spectrum from its own financial resources. Under these circumstances, the commercially-backed surrogate is much more likely to secure the spectrum than the entity which plans only educational uses for its channels. Another skewed outcome is likely when multiple EBS licensees are backed by different commercial parties, and the auction winner is determined by which for-profit entity has the deepest pockets. To prevent these undesirable outcomes, the Commission should require that EBS bidders pay for spectrum from their own funds, without using money obtained from third parties.

IMWED further argues that the purposes of the Communications Act's auction provisions will be furthered if the commercial funding if EBS spectrum auctions is barred. Those purposes are, in pertinent part:

> …promoting economic opportunity and competition and ensuring that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses and *by disseminating licenses among a wide variety of applicants...*[20] [Emphasis added.]

[20] 47 USC 309(j)(3)(B).

EBS licenses obtained through auction should not be distributed only to those entities backed by deep-pocketed lessees, but rather should be available to a wide variety of licensees serving a full array of educational interests, including those applicants which seek to operate purely educational systems.

E. Designated Entity Provisions Should Apply to EBS Spectrum Auctions.

The spectrum auction purposes cited above also support the Commission's providing bidding credits for small entities seeking to buy EBS spectrum, including those governed by racial and ethnic minorities, women, and rural interests.[21] The bulk of EBS licenses are today held by large institutions with considerable economic resources, such as universities and school districts. While these licensees often render highly meritorious educational service, Congress has mandated that bidding processes should be designed to help a wide variety of entities to secure EBS spectrum---especially small entities and those that are less established and those controlled by minorities and women. Given that there are relatively few such licensees in the EBS service currently, IMWED believes that the Commission should adopt designated entity provisions with respect to auctions of EBS spectrum.

V. Limitations on Channel Assignments by EBS Licensees.

The Commission has determined that the EBS "four channel rule" does not apply to markets once they have been transitioned, as its limitations would preclude swaps and other features needed in the new environment. It inquires as to whether this limit also should be eliminated with respect to markets that have yet to transition.[22] The Commission states:

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[21] See 47 USC 309(j)(4)(D).

[22] EBS/BRS Report and Order, paragraphs 345-346.

> Commenters supporting the retention of the four-channel rule should explain why they believe the rule is appropriate and necessary given current market and regulatory conditions.[23]

The Commission has stated that as a policy matter it wishes all markets to be transitioned within three years, and thus the intellectual challenge the Commission poses in the FNPRM is insurmountable; there is simply no reason why retaining this limitation for an interim period not to exceed three years provides any public interest benefit. To the contrary, the Commission points out that EBS as a service already is evolving from its video origins,[24] and, significantly, the new EBS rules permit two-way digital operation even prior to a transition Given these facts, the scale swings strongly in favor of abolishing the limitation immediately, since the same sorts of swaps and other spectrum management techniques originally contemplated for the post-transition period will be needed sooner.

Respectfully submitted,

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[23] *Id*., paragraph 346.
[24] *Id*.