

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Amendment of Part 2 of the Commission's)
Rules to Allocate Spectrum Below 3 GHz for) ET Docket No. 00-258
Mobile and Fixed Services to Support the)
Introduction of New Advanced Wireless)
Services, including Third Generation Wireless)
Systems)

**PETITION FOR RECONSIDERATION
OF NINTH REPORT AND ORDER**

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ASSOCIATION INTERNATIONAL, INC.

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June 23, 2006

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EXECUTIVE SUMMARY

Throughout this proceeding, the Commission has committed to those who have invested millions of dollars to deploy the Broadband Radio Service (“BRS”) facilities that today provide consumers with wireless broadband and other valuable services over the 2150-2162 MHz band that they will be made whole if forced to undergo an involuntary relocation to clear the band for Advanced Wireless Service (“AWS”) auction winners. Unfortunately, although the *Ninth Report and Order* (the “*Ninth R&O*”) purports to satisfy that objective, in fact the rules adopted by the Commission to govern the relocation of the 30-50 BRS systems that utilize band fail to do so. To the contrary, unless those rules are modified as proposed by the Wireless Communications Association International, Inc. (“WCA”) herein, some (if not all) of today’s incumbent BRS systems that utilize the 2150-2162 MHz band may be doomed.

In some cases, today’s BRS systems will die a quick death, as transmissions from new AWS base stations cause debilitating interference to nearby BRS base stations. Although the *Ninth R&O* has provided BRS incumbents with appropriate protection against interference from cochannel AWS deployments by requiring the relocation of vulnerable BRS operations before AWS can commence operations, the Commission failed to extend that protection to non-cochannel deployments as proposed by WCA, CTIA and others. Instead, the rules adopted in the *Ninth R&O* permit the deployment of new non-cochannel AWS base stations without so much as prior coordination with the BRS licensee, subject merely to the obligation that the AWS licensee cure after the fact whatever interference it may cause. This is not adequate. BRS subscribers deprived of their Internet access due to interference from an AWS newcomer will not wait days, much less weeks or months, for the AWS licensee (who may be competing against the BRS system and thus benefit directly from its own interference) to cure the interference it has caused. Rather, BRS subscribers will find an alternative service provider. If the Commission truly intends to assure that BRS service is not disrupted by AWS, it must at a minimum do as it did to assure that AWS and Personal Communications Services newcomers not disrupt point-to-point microwave incumbents – require prior coordination with BRS by non-cochannel AWS auction winners, utilizing the well-established notice and response system set forth in Section 101.103(d) of the Commission’s Rules, prior to deploying any base station within line-of-sight of an operational BRS facility in the 2150-2162 MHz band.

In other cases, BRS systems will expire more slowly. Evidencing a slavish devotion to the policies adopted in the *Emerging Technologies* proceeding to govern the relocation of fixed point-to-point microwave facilities, the *Ninth R&O* has ruled that a BRS licensee is not entitled to recompense if it makes system modifications designed to increase throughput. However, over the 15 years that AWS auction winners have to involuntarily relocate BRS incumbents, it is inevitable that consumers will be demanding ever increasing bandwidth (remember, 15 years ago most consumers were more than happy with 9.6 kbps dial-up service). As a practical matter, the Commission has made it impossible for a BRS operator to expand its throughput prior to relocation – investment dollars will not flow to 2.1 GHz system modifications that are destined to become stranded investment once the BRS system is migrated off the 2.1 GHz band. If BRS system operators cannot meet demand by increasing their present throughput, consumers will abandon them in favor of alternative suppliers that have no restrictions on their ability to add bandwidth in response to consumer demand. Just as 9.6 kbps is dead and 56 kbps dial-up service is dying on the vine, so too will 2.1 GHz BRS-based service expire.

The draconian impact of the Commission's failure to permit throughput increases is compounded by the Commission's refusal to permit 2.1 GHz band licensees to self-relocate, notwithstanding that self-relocation by point-to-point microwave systems was an essential component of the Commission's *Emerging Technologies* policies. A point-to-point microwave operator that needed to increase throughput could self-relocate and expand capacity in the process. While it would not secure compensation for the costs of expanding capacity, the expansion investment was not at risk of being stranded since it was made at the new home. By contrast, a BRS licensee cannot self-relocate, but rather must remain passively at the 2.1 GHz band while its subscriber base slowly abandons it for alternative providers that can meet increasing demand for bandwidth. The solution, simply put, is to provide 2.1 GHz band BRS licensees with the self-relocation rights proposed by WCA in its comments in response to the *Fifth Notice of Proposed Rule Making* – rights that WCA cabined to assure that the AWS newcomer pays only the reasonable cost of comparable facilities and not the costs of system upgrades.

Although the *Ninth R&O* recognizes the likely competition in the marketplace between BRS and the AWS newcomer, the rules adopted in the *Ninth R&O* fail to adequately address the unique risks (not present in other *Emerging Technologies* situations) that AWS licensees will abuse the involuntary relocation process to the detriment of incumbents and their subscribers. Although the Commission indicated that “[a]s a practical matter, we expect a BRS incumbent to take an active role in the actual relocation of its facilities, including selecting and deploying comparable facilities” the rules do not provide any assurance that incumbents will play such a role. Rather, if negotiations fail and an involuntary relocation occurs, it is the newcomer who selects the comparable facilities and the media, and the newcomer has the right to deploy all facilities except for subscriber equipment. Although the Commission appears to contemplate that the BRS operator will replace the subscriber equipment, there is no provision by which it can secure advance funding for the massive effort of replacing all subscriber equipment (much less one assuring that they will be reimbursed for their outlays), and its internal costs (which are likely to be substantial) are not even eligible for reimbursement. Thus, the new rules must be revisited to provide that where an involuntary relocation must occur, the BRS incumbent will be responsible for taking all steps necessary to complete deployment of comparable facilities (including any required customer equipment changeouts). Procedures similar to those employed in the 800 MHz rebanding can be used to assure pre-payment of estimated costs and avoid the incursion of excess costs, and rules can readily be crafted to assure that there are no undue delays.

Finally, the *Ninth R&O* failed to address proposals under which each F Block AWS auction winner be required both: (i) to reimburse the entity that serves as the 2.5 GHz band transition Proponent for the *pro rata* transition costs associated with BRS channels 1 and 2 in accordance with Section 27.1233(c) of the Commission's Rules; and (ii) to fund the migration of Broadband Auxiliary Service licensees from 2496-2500 MHz to clear that band for BRS 1 relocation. The Commission should adopt those proposals on reconsideration.

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**PETITION FOR RECONSIDERATION
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The Wireless Communications Association International, Inc. (“WCA”)¹ acting pursuant to Section 1.429 of the Commission’s Rules,² hereby petitions the Commission to reconsider certain aspects of the *Ninth Report and Order* in the above-captioned proceeding.³

In crafting the *Emerging Technologies* policies that, for better or worse, are at the heart of the *Ninth R&O*, the Commission has committed to incumbent service providers that the viability of their existing businesses “will not be threatened.”⁴ WCA most certainly applauds that commitment. Unfortunately, although the *Ninth R&O* purports to assure the continuity of

¹ As the trade association of the wireless broadband industry and the primary advocate for Broadband Radio Service (“BRS”) licensees and system operators using the 2150-2162 MHz band, WCA has been deeply involved in the Commission’s efforts over the past six years to devise appropriate rules for refarming the 2150-2162 MHz band to make that spectrum available for Advanced Wireless Services (“AWS”). WCA was an active participant in earlier rounds of this proceeding, and submitted formal comments and reply comments and made several *ex parte* presentations in response to the *Fifth Notice of Proposed Rulemaking*.

² 47 C.F.R. § 1.429 (2005).

³ *Amendment of Part 2 of the Commission’s Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems*, ET Docket No. 00-258, Ninth Report and Order and Order, FCC 06-45 (rel. Apr. 21, 2006) [*“Ninth R&O”*]. WCA will not here address in detail its continuing concerns regarding the Commission’s failure to restrict use of the 2496-2500 MHz band designated for BRS channel 1 relocation by Mobile Satellite Service (“MSS”) and Broadcast Auxiliary Service (“BAS”) licensees. WCA intends to seek reconsideration of the Commission’s recent *Order on Reconsideration and Fifth Memorandum Opinion and Order and Second Report and Order* in IB Docket No. 02-364 and WT Docket No. 03-66 and at that time will seek appropriate relief.

existing incumbent services, the rules adopted by the Commission fail to do so. To the contrary, unless those rules are modified as proposed by WCA herein, the *Ninth R&O* may sound the death knell for some (if not all) of today's incumbent 30-50 2.1 GHz BRS systems.

I. THE NINTH R&O FAILS TO PROTECT INCUMBENT BRS SYSTEMS AND THEIR SUBSCRIBERS FROM HARMFUL INTERFERENCE CAUSED BY NON-COCHANNEL AWS DEPLOYMENTS.

From the time the Commission established its *Emerging Technologies* policies, the Commission has promised incumbents that it will “protect operations of incumbent licensees from harmful interference caused by operations of emerging technology licensees.”⁵ To its credit, the Commission accomplished that objective with respect to AWS operations that will be cochannel to BRS incumbent operations. Based on a WCA proposal,⁶ newly-adopted Sections 27.1132 and 27.1250 *et seq.* should in most cases adequately protect BRS incumbents from interference caused by *cochannel* AWS operations. However, the rules adopted in the *Ninth R&O* fail to protect sufficiently BRS incumbents and their subscribers from *non-cochannel interference*, despite irrefutable evidence in the record that such interference can threaten BRS incumbent operations.

In response to the *Fifth Notice of Proposed Rulemaking* (“*Fifth NPRM*”),⁷ WCA, CTIA and others recognized that the risk of non-cochannel interference to BRS facilities operating in

⁴ *Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*, First Report and Order and Third Notice of Proposed Rulemaking, 7 FCC Rcd 6886, 6889 (1992).

⁵ *Id.* at 6890. See also *Amendment of the Commission's Rules to Establish New Personal Communications Service*, Second Report and Order, 8 FCC Rcd 7700, 7757 (1993). (“A principal concern in the authorization of PCS in the 2 GHz band is that existing fixed microwave operations be protected.”); *Amendment of the Commission's Rules to Establish New Personal Communications Services*, Memorandum Opinion and Order, 9 FCC Rcd 4957, 5026 (1994).

⁶ See Comments of the Wireless Communications Ass'n Int'l, Inc., ET Docket No. 00-258, at 35-36 (filed Nov. 25, 2005) [“WCA Comments”].

⁷ See *Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems*, Eighth Report and Order, Fifth Notice of Proposed Rule Making and Order, 20 FCC Rcd 15866 (2005) [“*Fifth NRPM*”].

the 2150-2162 MHz band and urged the Commission to require the relocation of any BRS facility within line-of-sight of a new AWS base station before that base station can commence service.⁸ Admittedly, non-cochannel interference may not necessarily occur in every instance where a single AWS station is deployed within line-of-sight of a non-cochannel BRS operation, particularly if the AWS licensee attenuates its out-of-band emissions (“OOBE”) to a far greater degree than required by Section 27.53(g) of the Commission’s Rules and operates at less than maximum authorized power. However, no doubt there is a risk of non-cochannel interference, particularly where AWS licensees utilize equipment that only marginally complies with the Section 27.53(g) OOBE limits, operates near maximum authorized power, or is in close physical proximity to a BRS receiver.⁹ Indeed, even those who objected to mandatory BRS relocation before any non-cochannel AWS base station could be deployed within line-of-sight concede that non-cochannel interference can be a threat to BRS incumbents.¹⁰

⁸ See Comments of CTIA, ET Docket No. 00-258, at 5-6 (filed Nov. 25, 2005) (“[A]ny AWS licensee that wants to deploy within the line of sight to a BRS hub station [must] relocate the BRS system and the customers served by that system.”); WCA Comments at 35-36; Reply Comments of Wireless Communications Ass’n Int’l, Inc., ET Docket No. 00-258, at 20-21 (filed Dec. 12, 2005) [“WCA Reply Comments”]; Comments of Sprint Nextel Corporation, ET Docket No. 00-258, at 26-32 (filed Nov. 25, 2005) [“Sprint Comments”].

⁹ See, e.g., Sprint Comments at 14-21; Letter from Trey Hanbury, Director, Sprint Nextel Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 00-258 (filed Feb. 7, 2006) (filing engineering analysis provided by Robert Gehman, Jr., P.E.).

¹⁰ See Letter from George Wheeler, Counsel to United States Cellular Corp., to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 00-258, Attachment at 1, 8, 11 (filed Apr. 5, 2006); Letter from Kathleen O’Brien Ham, Managing Director, T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 00-258, Attachment at 4 (filed Apr. 5, 2006) (contending that adjacent channel operations are possible “so long as adequate geographic separations are maintained.”).

Unfortunately, the *Ninth R&O* appears to give undue weight to flawed eleventh hour analyses of the issue (to which WCA was unable to respond due to the restrictions imposed upon release of the Commission’s “sunshine agenda”). For example, United States Cellular Corporation (“USCC”) submitted studies that ignored the potential for cross-modulation and intermodulation interference, presumed the use of an AWS transmitter with OOBE rejection characteristics far superior to that required by the Commission’s rules and transmissions at power levels well below the maximums permitted. Moreover, although USCC was responding to a study prepared for Sprint Nextel Corporation (“Sprint Nextel”) by Axcera, the manufacturer of the BRS reception equipment used by Sprint Nextel, it strangely chose to base its analysis on equipment manufactured by Hybrid that has no relevancy to the interference Sprint Nextel will suffer. T-Mobile USA, Inc. (“T-Mobile”) relied on a 2001 study by the Commission that examined interference from AWS into BRS

In response to this record, the Commission recognized that non-cochannel interference is a serious concern. Yet, it concluded that since not every possible AWS base station with line-of-sight to a BRS incumbent poses a threat, “a line-of-sight test for AWS entrants operating outside the 2150-2160/62 MHz band would be much more over inclusive than the application of such a test to in-band operations.”¹¹ Given the risk of interference, however, the Commission did adopt Section 27.1255(b), which provides that “[a]ny AWS licensee in the 2110-2180 MHz band that causes actual and demonstrable interference to a BRS licensee in the 2150-2160/62 MHz band must take steps to eliminate the harmful interference, up to and including relocation of the BRS licensee...” Unfortunately, while Section 27.1255(b) is certainly welcome and should remain in the Commission’s Rules, it does not go far enough to meet the Commission’s commitment that incumbent BRS businesses “will not be threatened” by the deployment of AWS.¹²

The flaw in the Commission’s approach is patent – it requires subscribers to the BRS system to suffer actual interference, obliges the BRS system operator to then track down the

video systems, not two-way data systems of the sort at issue today, and assumed lower transmit powers for AWS than were subsequently permitted by the Commission. See Letter from Nicole McGinnis, Director, Sprint Nextel Corp., to Marlene H. Dortch, Secretary, Federal Communications Commissions, ET Docket No. 00-258, at 2 (filed Apr. 3, 2006). Given that T-Mobile has endorsed the Commission’s decision to permit substantially higher power levels in rural areas (where many BRS systems today operate), its reliance on power levels even below that permitted in urban areas is particularly troubling. See Comments of T-Mobile USA, Inc., WT Docket No. 02-381, at 12 (filed Jan. 14, 2004).

¹¹ *Ninth R&O* at ¶ 54. And, the *Ninth R&O* “emphasize[d]...that if any AWS system – regardless of where within the 2110-2175 MHz band – causes actual and demonstrable interference to a BRS system, then the AWS licensee is responsible for taking the necessary steps to eliminate the harmful interference, up to and including relocation of the BRS licensee.” *Id.* (citation omitted).

¹² As discussed *infra*, there is a disconnect within the decision at issue as to an AWS licensee’s obligations towards a non-cochannel BRS operation. In the *Order* addressing WCA’s petition for reconsideration in WT Docket No. 02-353, the Commission states that in the *Ninth R&O*, the Commission is “requiring AWS licensees in the 2110-2155 MHz band, *prior to operating a base station that would cause harmful interference to incumbent BRS operations in the 2150-2160/62 MHz band*, to either relocate the BRS operations or undertake system modifications[.]” *Ninth R&O* at ¶128 n.408 (emphasis added). Were that the case, WCA would have no objection. However, newly-adopted Section 27.1255(b) does not appear to require relocation of BRS or AWS system modification until after the interference is caused. Thus, this petition provides the Commission a vehicle for bringing its rules into compliance with the *Order*’s statement.

source and prepare a demonstration that the AWS base station is the cause, and then forces the BRS system operator and its customers to wait patiently while the AWS licensee attempts to cure the problem without any deadline for doing so. The incumbent service provider, and its subscribers, must suffer the interference for days, weeks or even months, while the newcomer (who likely will be competing against the incumbent) can commence its business operations. Rather obviously, BRS subscribers who lose their Internet access due to interference will not remain subscribers for long – faced with an interminable loss of BRS service, subscribers will quickly migrate to whatever alternative sources of Internet access are available (perhaps including, ironically, the interfering AWS operation).

Although WCA continues to believe that the approach it, CTIA and others advanced in response to the *Fifth NPRM* is sound, WCA is not today seeking reconsideration of the Commission’s refusal to impose mandatory involuntary relocation obligations upon any AWS licensee constructing a non-cochannel base station with line-of-sight to an incumbent BRS facility. Rather, WCA today merely urges the Commission to provide incumbent BRS licensees with the same protection against non-cochannel interference that AWS must afford to incumbent point-to-point microwave licensees – prior coordination utilizing the time-tested notice and response system embodied in Section 101.103(d) of the Commission’s Rules.

From the first application of the Commission’s *Emerging Technologies* policies in connection with the allocation of spectrum for Personal Communications Services (“PCS”), the Commission has found that “a prior coordination procedure is necessary to ensure that potential issues of interference are resolved before deployment of PCS systems.”¹³ Since then, the Commission has consistently utilized prior notice and response coordination requirements under

¹³ *Amendment of the Commission's Rules to Establish New Personal Communications Services*, Memorandum Opinion and Order, 9 FCC Rcd 4957, 5030 (1994). Significantly, the Commission adopted prior coordination requirement despite concerns that such a requirement would delay the implementation of PCS. *See id.* at 5029.

situations such as that here.¹⁴ Most recently the Commission required AWS licensees to comply with the very same rules that required PCS newcomers to engage in prior coordination with respect to point-to-point microwave licensees in the 2110-2150 MHz band.¹⁵ There is no logical reason why BRS licensees should not be entitled to the same prior notice and response coordination.¹⁶ Indeed, as noted above, the *Order* dismissing as moot WCA's petition for reconsideration in WT Docket No. 02-353 asserts that AWS licensees have an obligation (albeit one not reflected in the Commission's rules) to avoid interference "*prior to operating a base station that would cause harmful interference to incumbent BRS operations in the 2150-2160/62 MHz band.*"¹⁷ Imposing a notice and response prior coordination requirement on AWS with respect to incumbent BRS licensees will provide a mechanism by which AWS licensees can meet this obligation.

Imposition of a mere prior notice and response coordination obligation on non-cochannel AWS licensees also obviates the concerns of those who had initially opposed requiring relocation of BRS incumbents before non-cochannel AWS base stations could be deployed. For example, T-Mobile expressed concern that the WCA/CTIA approach might overestimate the impact that AWS will have on BRS and urged a more "real-world" model.¹⁸ The prior coordination process could not be more "real-world," as it requires the parties to consider the

¹⁴ See, e.g., 47 C.F.R. §§ 25.203(c), 25.251 (satellite earth stations); 47 C.F.R. § 74.638(b) (Broadcast Auxiliary Service); 47 C.F.R. § 101.103(d) (fixed point-to-point microwave); 47 C.F.R. § 78.36 (Cable Television Relay Service).

¹⁵ See 47 C.F.R. § 27.1131 ("All AWS licensees, prior to initiating operations from any base or fixed station must coordinate their frequency usage with co-channel and adjacent channel incumbent, Part 101 fixed-point-to-point microwave licensees in the 2110-2155 MHz band. Coordination shall be conducted in accordance with the provisions of § 24.237 of this chapter.").

¹⁶ Indeed, the Commission has previously recognized the substantial benefits of applying a uniform system for prior coordination. See *Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*, Second Report and Order, 8 FCC Rcd 6495, 6516 (1993) ("we are adopting uniform Part 21 [now Part 101] coordination procedures...for the 4, 6, 10, and 11 GHz bands").

¹⁷ See *supra* n.12, quoting *Ninth R&O* at ¶ 128 n.408.

specific technical parameters of both the AWS facilities being deployed and the BRS facilities that might suffer interference. Moreover, while USCC feared that mandatory involuntary BRS relocation by non-cochannel AWS licensees could result in unnecessary delays while the BRS incumbent is being relocated,¹⁹ mandatory prior coordination should cause AWS licensees no additional delay beyond that associated with their existing point-to-point microwave and government incumbent coordination obligations, and only minimal delay where such obligations do not exist.²⁰

Therefore, WCA proposes that the Commission amend Section 27.1132 of the Rules as set forth in Attachment A. WCA's proposal is based substantially on the language of Section 24.237 of the Rules (which governs AWS and PCS prior coordination with point-to-point microwave), but with modifications necessary to reflect the fundamental differences between BRS and point-to-point microwave incumbents.

II. THE COMMISSION MUST REVISIT ITS EXCLUSION OF INCREASES IN THROUGHPUT FROM "COMPARABLE FACILITIES" AND ITS DENIAL TO BRS INCUMBENTS OF A RIGHT TO SELF-RELOCATE.

While providing BRS incumbents with protection against the devastating non-cochannel interference will avoid immediate harm to incumbent operations, the Commission's decision to deny recompense for any BRS system modifications that increase BRS system throughput effectively condemns those BRS systems that are not relocated quickly to die a slow death in the marketplace,²¹ particularly when coupled with the Commission's curious denial to BRS

¹⁸ See Reply Comments of T-Mobile USA, Inc., ET Docket No. 00-258, at 4-5 (filed Dec. 12, 2005).

¹⁹ See Reply Comments of United States Cellular Corp., ET Docket No. 00-258, at 3 (filed Dec. 12, 2005).

²⁰ See *The Federal Communications Commission and the National Telecommunications and Information Administration – Coordination Procedures in the 1710-1755 MHz Band*, WTB Docket No. 02-353, *Public Notice*, FCC 06-50 (rel. Apr. 20, 2006).

²¹ See *Ninth R&O* at ¶ 33.

incumbents of the self-relocation rights afforded others under the *Emerging Technologies* polices.²²

The problem facing BRS incumbents is an obvious one. Over the 15 year period that AWS auction winners have to involuntarily relocate BRS incumbents, it is inevitable that consumers will be demanding ever increasing bandwidth. If BRS system operators cannot meet that demand by increasing their present throughput, consumers will abandon them in favor of alternative suppliers that have no restrictions on their ability to provide the bandwidth demanded by the marketplace. Just as the 9.6 kbps dial-up service that was typical 15 years ago is dead and even 56 kbps dial-up service is today dying on the vine, so too will 2.1 GHz BRS-based services expire in the future if restricted to today's bandwidth.

As a practical matter, the Commission's decision to exclude modifications that expand throughput from the comparable facilities renders it impossible for a BRS operator to expand its throughput prior to relocation. The equipment that likely would be deployed by a BRS operator to expand the throughput of its 2.1 GHz band system would be band-specific and not be of utility once the BRS operator is involuntarily relocated from that band.²³ As a result, investment dollars simply will not flow to 2.1 GHz system modifications that are destined to become

²² *Id.* at ¶ 20.

²³ The mechanism employed by BRS incumbents to increase system capacity is to engage in sector-splitting – the replacement of wide beamwidth base station antennas with additional narrower beamwidth antennas and associated equipment. For example, as W.A.T.C.H. TV Company (“W.A.T.C.H. TV”), provider of wireless broadband and multichannel video service to consumers in and around Lima, Ohio, made clear in response to the *Fifth NPRM*, it “has already converted its antenna system from four 90 degree sectors to eight 45 degree sectors to meet the growing demand for its broadband service, and anticipates a further sector split (which results in increased frequency reuse) if existing capacity is strained.” Reply Comments of W.A.T.C.H. TV Company, ET Docket No. 00-258, at 4 (filed Dec. 21, 2005) [“W.A.T.C.H. TV Reply Comments”]. Similarly, Evertek, Inc., a provider of multichannel video programming and high-speed broadband services in the agriculturally-based communities in Iowa, stated that it anticipates a need to re-sectorize its antenna system. *See* Reply Comments of Evertek, Inc., ET Docket No. 00-258, at 5 n.10 (filed Dec. 21, 2005) [“Evertek Reply Comments”]. Sioux Valley Wireless, provider of wireless broadband and multichannel video service to customers in South Dakota, Iowa, Nebraska, and Minnesota, indicated that a freeze on antenna modifications would be “devastating” to its current business. *See* Reply Comments of Sioux Valley Wireless, ET Docket

stranded investment once the BRS system is migrated off the 2.1 GHz band. Since an incumbent has no means of determining when, if ever, it will be relocated, it has no assurance that it will remain at 2.1 GHz long enough to realize a reasonable return on its investment to expand throughput. And that means investment dollars will not flow to BRS system modifications.

None of this should come as a surprise to the Commission. Almost a decade ago, the Office of Plans and Policy's seminal working paper on broadband, "*Digital Tornado: The Internet and Telecommunications Policy*," found that the availability of high-capacity networks increases demand for bandwidth-intensive applications, and that this creates a demand for bandwidth intensive applications that in turn require even more capacity, resulting in a continuous "Internet feedback loop" or "spiral" of supply and demand.²⁴ "Like a digital tornado, the vortex continues, as the new level of demand creates the need for additional capacity, and so forth."²⁵ That analysis proved prescient – average Internet connection speeds continue to increase from year to year,²⁶ and consumer demand for the faster Internet connection speeds needed to power new applications continues to grow at a similar clip.²⁷ Over the last 15 years

No. 00-258, at 7 (filed Dec. 21, 2005). Because these antenna systems are designed for use at 2.1 GHz, they would have to be replaced if BRS is relocated to the 2.5 GHz band or virtually any other possible spectrum.

²⁴ See Kevin Werbach, *Digital Tornado: The Internet and Telecommunications Policy*, Federal Communications Commission, Office of Plans and Policy, Working Paper Series No. 29, at 5 (Mar. 1997).

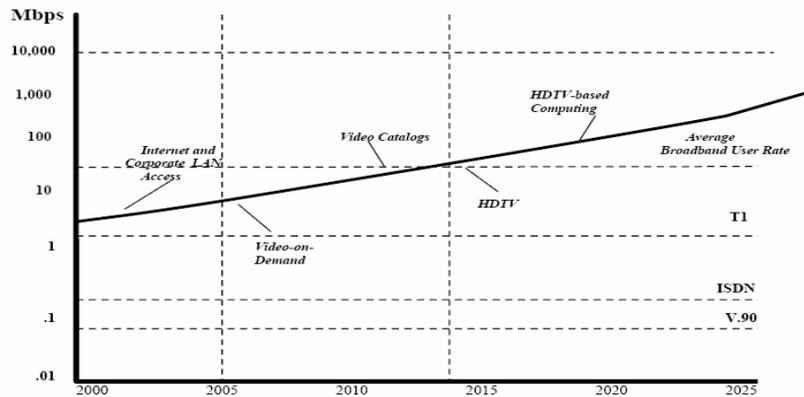
²⁵ *Id.*

²⁶ See, e.g., *Local Telephone Competition and Broadband Reporting*, Notice of Proposed Rulemaking and Order on Reconsideration, 19 FCC Rcd 7364, 7367 (2004) ("[W]e have observed, in recent years, the emergence of competing platforms to deliver high-speed services, increasing data speeds of services offered, and a steady improvement in mass-market acceptance of services.").

²⁷ See, e.g., Separate Statement of Commissioner Kevin J. Martin, *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion*, Third Report, 17 FCC Rcd 2844, 2959-60 (2002) ("As we acknowledge, many of the most exciting applications, such as video-on-demand, require transmission speeds significantly in excess of 200 kbps. There are strong arguments that such applications, or others that require higher speeds, offer the kind of content that consumers truly demand...."). See also, e.g., Marguerite Reardon, *Ups and downs of consumer broadband*, CNET NEWS.COM (Aug. 1, 2005) ("[D]emand for faster upload speeds will continue to grow, in large part because it is starting to come from more mainstream broadband users.") available at http://news.com.com/Ups+and+downs+of+consumer+broadband/2100-1034_3-5810534.html.

(the same period afforded AWS to involuntarily relocate BRS incumbents), consumer Internet connection speeds have increased from 9.6 kbps in 1990 to the multimegabit speeds cable, Digital Subscriber Line (“DSL”) and BRS all offer today.²⁸ Indeed, just within the past year or so the major cable multiple system operators and DSL providers substantially raised the bandwidth provided residential consumers without increasing the rates they charge.²⁹ Moreover, as the chart in Figure 1 illustrates, the average residential broadband rate is projected to increase materially over the next 15 years, as consumers demand greater bandwidth for new services.

Figure 1 - Average Residential Broadband Rate Over Time³⁰



Rather clearly, BRS incumbents operating in the 2150-2162 MHz band must constantly increase their throughput if they are to continue to serve as viable competition to cable and DSL providers.

²⁸ See *infra* n.30

²⁹ See, e.g., Ed Oswald, *Verizon Speeds Up DSL Downloads*, BETANEWS (Apr. 5, 2005) available at http://www.betanews.com/article/Verizon_Speeds_Up_DSL_Downloads/1112632842; Jim Hu, *Comcast expected to raise broadband speeds*, CNET NEWS.COM (Jan. 14, 2005) (reporting that, Comcast Corporation had raised its speed of up to 3 Mbps downstream and 256 kbps upstream to 4 Mbps and 384 kbps, respectively, at no additional cost. Time Warner Cable soon followed suit by raising its basic download speed to 5 Mbps from 3 Mbps, also at not additional cost to customers. Cox Communications also increased its download speeds from 3 Mbps to 4 Mbps.) available at http://news.com.com/Comcast+expected+to+raise+broadband+speeds/2100-1034_3-5537139.html?tag=nl; Ed Oswald, *RCN Boosts Cable Internet Speeds*, BETANEWS (Mar. 17, 2006) (reporting that RCN had introduced a service that would provide up to 20 Mbps downstream and 2 Mbps upstream to stay competitive with new offerings from Verizon) available at http://www.betanews.com/article/RCN_Boosts_Cable_Internet_Speeds/1142608288.

³⁰ See Kim Maxwell, *Residential Broadband*, at 11, Wiley Computer Publishing (1999).

Conversely, the Commission has to look no further than to the current difficulties facing America Online (“AOL”) to see what will happen to current BRS incumbents if they are effectively precluded from increasing their throughput to meet consumer demand. Because AOL’s core 56 kbps dial-up service offers Internet connection speeds that are significantly slower than those offered by broadband service providers, AOL has been hemorrhaging subscribers over the last few years.³¹ AOL’s difficulties illustrate how quickly the market punishes those who fail to meet customer demand for greater speed.

It is impossible to square the Commission’s refusal to afford BRS incumbents recompense for throughput increases with the Commission’s clear acknowledgement of its duty to “minimize the economic impact on licensees” of incumbent services facing involuntary relocation.³² Indeed, despite the evidence in the record that BRS incumbents will suffer dire harm if not permitted to expand throughput, the *Ninth R&O* does not provide any meaningful discussion of the issue.³³ Rather, the Commission merely reasons that denying BRS incumbents compensation for increases in throughput will allow “new entrants to have some certainty about relocation expenses.”³⁴ What this ignores is that AWS auction participants can be presumed to be aware that consumer bandwidth needs are likely to grow in the future; in fact, the most active AWS auction participants are likely to include existing carriers that need additional spectrum to meet that growing demand themselves. Thus, AWS auction participants are fully capable of

³¹ As of the end of 2005, AOL had a total of 19.5 million U.S. subscribers, down 27% from its peak of 26.7 million in 2002. See Ed Oswald, *AOL: Drop Dial-Up, Get Broadband*, BETANEWS (Feb. 21, 2006) available at http://www.betanews.com/article/AOL_Drop_DialUp_Get_Broadband/1140566579. See also Tim Richardson, *AOL loses 2m US customers*, THE REGISTER (Nov. 3, 2004) available at http://www.theregister.co.uk/2004/11/03/aol_q3_04/; Elinor Mills, *AOL ready to reinvent itself*, CNET NEWS.COM (Aug. 2, 2005) available at http://news.com.com/AOL+ready+to+reinvent+itself/2100-1025_3-5814373.html?tag=st.bp.story; *AOL Rolls Out Low-Rate Broadband Plans*, FOX NEWS.COM (Jan. 30, 2005) available at <http://www.foxnews.com/story/0,2933,183211,00.html>.

³² *Fifth NPRM*, 20 FCC Rcd at 15875.

³³ See *supra* n.23.

estimating the costs BRS incumbents will incur to meet their future bandwidth needs (which costs, if any, will necessarily depend on the AWS auction participants' own timeline for relocating BRS incumbents) and adjusting their bids accordingly. Indeed, AWS newcomers can avoid the issue altogether merely by relocating BRS incumbents sooner rather than later.

The draconian impact of the Commission's failure to permit compensation for throughput increases is compounded by the Commission's failure to permit 2.1 GHz band licensees to self-relocate, notwithstanding that self-relocation by point-to-point microwave systems is an essential component of the Commission's *Emerging Technologies* policies. A point-to-point microwave operator that faces a need to increase throughput has always had the ability to self-relocate and expand capacity in the process. While it would not secure compensation for the costs of expanding capacity, the expansion investment made at the time of self-relocation is not at risk of being stranded. By contrast, a BRS licensee cannot self-relocate, upgrade throughput in the process and avoid the risk of stranded investment. Thus, the *Ninth R&O* is simply wrong when it suggests that by allowing BRS incumbents to add customers prior to involuntary relocation, the Commission has obviated the need for self-relocation.³⁵ While allowing the addition of subscribers certainly is a step in the right direction, the inability to expand throughput when necessary to provide potential subscribers the bandwidth they will be demanding undermines any possible benefit.

Self-relocation always has been a core element of the Commission's *Emerging Technologies* policies. The benefits of self-relocation are well-established - in providing for PCS reimbursement of point-to-point microwave incumbents who voluntarily relocated themselves

³⁴ *Ninth R&O* at ¶ 33 (citation omitted).

³⁵ See *Ninth R&O* at ¶ 20.

out of the 2 GHz band before the commencement of any negotiations, the Commission recognized that:

[I]ncumbent participation will accelerate the relocation process by promoting system-wide relocations. Incumbent participation will also give microwave incumbents the option of avoiding time-consuming negotiations, allowing for faster clearing of the 2 GHz band in some instances. We believe that promoting system-wide relocation in this way may even reduce the overall cost of clearing the 2 GHz band.³⁶

Indeed, the *Ninth R&O* essentially relies on the same rationale in giving incumbent point-to-point microwave licensees subject to displacement by AWS a right of self-relocation.³⁷ As Commissioner Adelstein correctly noted in expressing concerns regarding the omission of a right of self-relocation in BRS, “[s]elf-relocation procedures have proven to be a useful tool in promoting timely and prompt spectrum relocation proceedings in the past.”³⁸

The rationale provided in the *Ninth R&O* for the refusal to provide BRS incumbents the same self-relocation rights afforded others under *Emerging Technologies* cannot withstand scrutiny. The *Ninth R&O* rightly finds that because of the variety of BRS deployments at 2.1 GHz band, the Commission cannot fairly do as it has done for point-to-point microwave and establish caps on the compensation a BRS incumbent can recover upon migrating from the band.³⁹ However, from that finding the *Ninth R&O* wrongly jumps to the conclusion that no self-relocation plan can be implemented.⁴⁰

³⁶ *Amendment to the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation*, Second Report and Order, 12 FCC Rcd 2705, 2717 (1997) (citations omitted).

³⁷ See *Ninth R&O* at ¶ 75 (“Incumbent participation will provide FS incumbents in the 2.1 GHz band with the flexibility to relocate themselves and the right to obtain reimbursement of their relocation costs We also find that incumbent participation will accelerate the relocation process by promoting system wide relocations and result in faster clearing of the 2.1 GHz band, thereby expediting the deployment of new advanced wireless services to the public.”) (citations omitted).

³⁸ Statement of Commissioner Jonathan S. Adelstein, *Ninth R&O*.

³⁹ See *Ninth R&O* at ¶ 20.

⁴⁰ *Id.*

Caps were established as a component of the point-to-point microwave self-relocation process to assure that incumbents are not over-compensated for relocating to comparable facilities.⁴¹ WCA certainly has no quarrel with that objective. However, what is missing from the *Ninth R&O* is any appreciation that there are other means to assure that a self-relocating BRS licensee secures reimbursement only for its reasonable costs. Indeed, WCA advanced just such a proposal in response to the *Fifth NPRM* – a proposal not addressed in detail in the *Ninth R&O*.⁴² Under WCA’s proposal, a BRS incumbent contemplating self-relocation would be obligated to engage in a pre-migration coordination process with the appropriate F Block AWS licensee to assure that the costs being incurred are not excessive.⁴³

Allowing self-relocation will not only provide BRS incumbents a vehicle for increasing throughput to meet consumer demand without risking stranded investment, but it also has the benefit of reducing the inevitable inconvenience to the public from the first-ever forced migration of a subscription consumer service. Although apparently not given weight in the Commission’s consideration of the benefits of self-relocation, affording BRS incumbents such a right can minimize the number of times each subscriber must remain home for a service call. One of the primary concerns BRS system operators have with any migration from 2150-2162 MHz is the negative impact on the subscriber, who will be required to remain at home for a

⁴¹ See *Amendment to the Commission’s Rules Regarding a Plan for Sharing the Costs of Microwave Relocation*, Second Report and Order, 12 FCC Rcd 2705, 2717 (1997).

⁴² However, as the *Ninth R&O* does correctly note, the WCA proposal for self-relocation was supported by a substantial number of other filers. See *Ninth R&O* at ¶ 18 n.54. See also Reply Comments of SpeedNet, L.L.C., ET Docket No. 00-258, at 2-3 (filed Dec. 12, 2005) [“SpeedNet Reply Comments”]; Reply Comments of Polar Communications and Northern Wireless Communications, ET Docket No. 00-258, at 7-8 (filed Dec. 12, 2005); Evertek Reply Comments at 8-9; Reply Comments of James D. and Lawrence D. Garvey d/b/a Radiofone, ET Docket No. 00-258, at 3 (filed Dec. 12, 2005); Reply Comments of C&W Enterprises, Inc., ET Docket No. 00-258, at 2-3 (filed Dec. 12, 2005) [“C&W Reply Comments”]; W.A.T.C.H. TV Reply Comments at 7-8.

⁴³ See WCA Comments at 42-44. Another possible solution would be to require BRS licensees contemplating a self-relocation to secure the same sort of prior independent third-party cost estimate that AWS licensees planning to seek cost-sharing for an involuntary relocation must secure. See *Ninth R&O* at ¶ 120.

service call during which its current consumer premises equipment will be exchanged for equipment capable of operating on the new spectrum.⁴⁴ If given the ability to self-relocate, operators may choose to minimize the disruption by starting to migrate BRS customers immediately to currently-available alternate spectrum whenever a routine service call is made to the home, without awaiting the completion of a mandatory negotiation and involuntary relocation.⁴⁵

In short, the Commission's decision to effectively freeze throughput upgrades by BRS incumbents, while denying those incumbents the right of self-relocation afforded others subject to the *Emerging Technologies* policies, seriously threatens the viability of those pioneering BRS systems at issue here. To make good on its commitment to protect the continuity of BRS incumbents, the Commission can and should adjust its rules consistent with the discussion above.

III. THE NEWLY-ADOPTED RULES FAIL TO ALLOCATE THE COSTS AND RESPONSIBILITIES OF ANY INVOLUNTARY RELOCATION IN A MANNER THAT IS FUNDAMENTALLY FAIR TO BRS INCUMBENTS.

Throughout this proceeding, a central theme of WCA's filings has been that while the Commission's *Emerging Technologies* policies represent a useful starting point for guiding the relocation of BRS incumbents, those policies must be modified to reflect that the relocation of BRS will be the first time the Commission has relocated one competitor that provides wireless

⁴⁴ See WCA Comments at 43-44; See also, e.g., Comments of Wireless Communications Ass'n Int'l, Inc., ET Docket No. 00-258, at 48-53 (filed Feb. 22, 2001) ["WCA 00-258 NPRM Comments"]; Attachment to "A Compromise Solution for Relocating MDS From 2150-2162 MHz," attached as an appendix to Letter from Andrew Kreig, President, Wireless Communications Ass'n Int'l, Inc. *et al.*, to Michael K. Powell, Chairman, Federal Communications Commission, ET Docket No. 00-258, at Appendix A, n.8 (filed July 11, 2002).

⁴⁵ While some operators are spectrum constrained and may not be in a position to avail themselves of this option, others may have spectrum that had been set aside initially for future use as the customer base expands. This expansion spectrum could be put to use more rapidly as part of a migration plan, and the designated BRS channel 1 and 2 replacement spectrum in the 2.5 GHz band would then become that operator's expansion spectrum once it is cleared.

services directly to subscribers to clear the spectrum for another competitor.⁴⁶ Thus, WCA is pleased that the *Fifth NPRM* acknowledged that “BRS operations . . . are *significantly different* than point-to-point FS operations”⁴⁷ and that “because AWS entrants and BRS incumbents are potential competitors, we must include special provisions to protect the BRS licensees’ legitimate commercial interests.”⁴⁸ Unfortunately, the specific rules adopted in the *Ninth R&O* to govern the involuntary relocation process are largely carbon copies of those adopted in the mid-1990s to govern the clearing of point-to-point microwave links from spectrum reallocated for PCS, and fail to adequately address the unique risks (not present in other *Emerging Technologies* situations) that AWS licensees will abuse the involuntary relocation process to the detriment of incumbents and their subscribers.⁴⁹

A. *The Commission Must Allow For Recovery Of Internal Costs Associated With BRS Involuntary Relocations And For Advance Payment Of Costs.*

Admittedly, the *Ninth R&O* does address one BRS concern – that to preserve the proprietary relationship between the BRS system operator and its subscribers the AWS newcomer be removed from the process of replacing subscribers’ equipment. However, even there the Commission has not fully protected BRS interests. Although clearly intended, newly-adopted Section 27.1251(d) does not provide that it is the BRS incumbent that is responsible for the process of replacing equipment at subscribers’ locations at the AWS newcomer’s expense, and it most certainly does not adequately address the financial consequences of this allocation of responsibility.

⁴⁶ See WCA Comments at 13-18, 34 n.73; WCA Reply Comments at 2, 11, 18 n.47.

⁴⁷ See *Fifth NPRM*, 20 FCC Rcd at 15890 (emphasis added).

⁴⁸ *Ninth R&O* at ¶ 40.

⁴⁹ This despite the fact that when the Commission first adopted relocation rules in the *Emerging Technologies* proceeding, it specifically excluded BRS from its relocation plan because of the difference in the nature of the services. See *Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications*

As WCA and small BRS operators facing involuntary relocation stressed in response to the *Fifth NPRM*, migrating subscribers from the 2150-2162 MHz band will be both capital-intensive and labor-intensive. As WCA noted:

Operators will incur extraordinary expenses to notify . . . subscribers that their customer premises equipment must be replaced, to schedule appointments for such replacement, and to then supervise and successfully complete . . . truck rolls and equipment change-outs. In addition to the costs associated with acquiring new customer premises equipment to replace existing equipment (which obviously must be reimbursed), operators will incur huge expenses in connection with the diversion of their own personnel from the task of marketing and installing new subscribers to the task of relocation.⁵⁰

Hence, the internal costs of accomplishing replacement of subscriber equipment without compromising day-to-day operations may prove substantial.

WCA, C&W Enterprises, Inc., SpeedNet, L.L.C., and W.A.T.C.H. TV all advised the Commission that to ensure full reimbursement of BRS relocation costs, it is absolutely essential that BRS service providers be permitted to recover those internal costs associated with the task of relocation, provided that all such costs are directly attributable to relocation and are sufficiently documented.⁵¹ The *Ninth R&O* rejected that proposal, however, citing the

Technologies, First Report and Order and Third Notice of Proposed Rulemaking, 7 FCC Rcd 6886, 6888-89 (1992) (citations omitted).

⁵⁰ WCA Comments at 26, quoting WCA 00-258 NPRM Comments at 50. See also Comments of SpeedNet, L.L.C., ET Docket No. 00-258, at 5 (filed Nov. 22, 2005) (“[t]he time and costs associated with such a transition involves at a bare minimum informing the customer that a change is required, having the customer contact SpeedNet to schedule an appointment, the inconvenience to the customer at having to be home for the appointment, transportation and labor costs in sending a technician to change the equipment and the cost of the equipment itself. In-band or single band transceivers are available, yet often exceed \$400 each for just the equipment. In addition, SpeedNet must arrange for personnel to arrange such appointments and must take up hundreds of hours of employee hours arranging, coordinating and executing such changes, all time taken away from marketing and expanding its services to future customers.”). See also C&W Reply Comments at 2; SpeedNet Reply Comments at 2; W.A.T.C.H. TV Reply Comments at 6-7.

⁵¹ See WCA Comments at 25-26; C&W Reply Comments at 3-4; SpeedNet Reply Comments at 4; W.A.T.C.H. TV Reply Comments at 7-8.

Commission's *Emerging Technologies* precedent and asserting in summary fashion that "these costs are difficult to determine and verify."⁵²

The fact that internal costs are generally not recoverable under *Emerging Technologies* should be of no moment here. Never before has the Commission been faced with the competitive situation between incumbent and newcomer, and never before has the Commission effectively imposed on the incumbent an obligation essentially to relocate itself. Given that mandate, and the significant costs that will be imposed on incumbents as a result, failure to provide for recovery of internal costs cannot be squared with a Commission's overarching policy of making incumbents whole.

Moreover, in the context of another involuntary migration, the Commission has resolved the issue verifying internal costs, and there is no reason that the Commission cannot do the same here. In crafting its cost-recovery policies for the 800 MHz band rebanding project, the Commission permits incumbents to recover their documented internal costs attributable to their involuntary relocation.⁵³ Hence, consistent with this recent precedent, the Commission should permit a BRS incumbent to fully recover its internal costs associated with relocation of operations on BRS channels 1 and 2. The Commission obviously concluded in connection with the 800 MHz rebanding proceeding that internal costs can be identified and verified, and there is no reason for it to conclude otherwise here.

Along similar lines, the Commission on reconsideration must adopt the proposal, originally advanced by WCA in response to the *Fifth NPRM* but not addressed in the *Ninth*

⁵² *Ninth R&O* at ¶ 24 (citation omitted).

⁵³ See *800 MHz Rebanding Reconsideration Order*, 19 FCC Rcd at 25150-51. Indeed, the web site for the 800 MHz Transition Administrator leaves no doubt about this: "If [an incumbent's] internal personnel perform reconfiguration or associated planning activities, [the incumbent] will be reimbursed for the actual time incurred by [its] employees at their hourly rate based on actual cost." 800 MHz Transition Administrator, Online Reference Guide version 1.1, Funding Guidelines, Internal Labor and Outside Vendors at <http://www.800ta.org/org/funding/labor.asp> ["800 MHz TA Labor and Vendor Funding Guide"].

R&O, that would provide a mechanism by which BRS incumbents can secure pre-payment of their anticipated relocation-related costs.⁵⁴ Just as 800 MHz licensees are not required to advance the funds for their own rebanding, the BRS incumbent should not be required to advance the costs of new equipment or other costs associated with replacing existing equipment and later seek reimbursement from the AWS licensee. As discussed *infra*, WCA has proposed a simple, self-effectuating process by which the BRS incumbent will not have to fund its own involuntary relocation, and the F Group AWS newcomer that ultimately is responsible for the costs of relocation will have an opportunity to assure that costs do not exceed that reasonably necessary to provide comparable facilities.

B. BRS Incumbents Should Be Afforded Greater Control Over Their Involuntary Relocation To Avoid The Threat Of Anticompetitive Mischief.

While WCA certainly appreciates the Commission's willingness to protect the relationship between a BRS system operator and its subscribers, the record illustrates that AWS newcomers will have at their disposal a myriad of other mechanisms for abusing their position to the detriment of their incumbent BRS competitors. Although the Commission indicated that "[a]s a practical matter, we expect a BRS incumbent to take an active role in the actual relocation of its facilities, including selecting and deploying comparable facilities" the rules adopted in the *Ninth R&O* do not provide any assurance that incumbents will play such a role.⁵⁵ Rather, if negotiations fail and an involuntary relocation occurs, it is the newcomer who selects the comparable facilities and the media, and the newcomer has the right to deploy all facilities except for subscriber equipment. Thus, the new rules must be revisited to provide that where an involuntary relocation must occur, the BRS incumbent will be responsible for taking all steps

⁵⁴ See WCA Comments at 21-22.

⁵⁵ *Ninth R&O* at ¶ 20.

necessary to complete deployment of comparable facilities (including any required customer equipment changeouts).

For example, the Commission's decision to allow the AWS newcomer to relocate BRS incumbents to wireline media or to wireless spectrum other than the designated BRS channel 1 and 2 replacement spectrum in the 2496-2690 MHz band opens the door to substantial mischief. As WCA noted previously, the AWS licensee could foist upon the BRS operations technology that might marginally meet the "comparable facilities" definition, but is functionally incompatible from a practical perspective with the other equipment being used by the BRS system on other channels.⁵⁶ WCA rejects the notion that an AWS licensee should be permitted to utilize wired technology to substitute for a 2.1 GHz BRS wireless link, particularly where the 2.1 GHz wireless link is part of a larger system using 2.5 GHz BRS spectrum. Not only would such a substitution not be comparable from the BRS incumbent's perspective, but it could also undermine consumer expectations. Suffice it to say that where DSL or cable modem service is available, the BRS wireless subscriber has presumably made an informed decision to subscribe to the wireless service, and not the wired alternative. How will the Commission explain to the affected BRS subscriber that he or she is being forced by Washington to migrate to a wired technology that the subscriber had previously rejected?

To fully protect the BRS incumbent, WCA reiterates its proposal that the Commission use an approach based on that developed just last year in WT Docket No. 02-55 to protect relocating 800 MHz incumbent commercial service providers. Specifically, WCA proposes that when mandatory negotiations fail and an involuntary relocation of BRS channel 1 and 2

⁵⁶ See WCA Comments at 18. The *Ninth R&O* exacerbates that risk by rejecting WCA's proposals for expanding the definition of "comparable facilities" beyond that provided in the initial *Emerging Technologies* decision. See also *Ninth R&O* at ¶¶ 21-25.

operations occurs,⁵⁷ the BRS system operator should have the sole responsibility for selecting and deploying “comparable facilities” and taking all other steps necessary to complete relocation of the operations to replacement spectrum, subject to payment of its legitimate expenses by the relevant AWS auction winner pursuant to the procedures discussed below.⁵⁸

To control the migration costs that will be incurred by BRS incumbents, and ultimately paid by AWS auction winners, the Commission should state with crystalline clarity here that: (i) the incumbents’ reimbursable costs of relocation are limited to those expenses of the BRS licensee and any spectrum lessee that are necessary to deploy and migrate to “comparable facilities”;⁵⁹ and (ii) that BRS licensees, BRS lessees and AWS licensees must negotiate and thereafter conduct any necessary involuntary relocation in good faith.⁶⁰

With that clear, any lingering concerns about incumbent “gold-plating” can be addressed by establishing a process under which BRS incumbents’ anticipated refarming costs are subject

⁵⁷ To further clarify the rights of BRS incumbents, Section 27.1250(c) should be revised to reflect the statement in the *Ninth R&O* that a 2.1 GHz BRS incumbent has the right to extend the three-year mandatory negotiation period for up to an additional year at any time when the 2.5 GHz band transition for its market has not yet taken place. See *Ninth R&O* at ¶ 39. Since newly-adopted Section 27.1250(c) of the Commission’s Rules does not clearly track that determination, WCA urges that Section 27.1250(c) be revised to read as follows:

“(c) Relocation of BRS licensees by AWS licensees will be subject to a three-year mandatory negotiation period. A BRS licensee may suspend the running of the three-year negotiation period for up to one year if the transition of the 2496-2690 MHz band for its geographic service area has not been completed pursuant to § 27.1235 at the time the AWS licensee seeks entry into the band.”

⁵⁸ To promote the earliest possible relocation of BRS from 2150-2162 MHz to the 2496-2690 MHz band, BRS service providers should be afforded immediate authority to operate in their replacement spectrum in the 2496-2690 MHz band, as well as in the 2150-2162 MHz band. Such dual authority is necessary to ensure a seamless relocation, as it will permit BRS systems to operate concurrently in both their existing spectrum and in their relocation spectrum until all subscribers can be provisioned with the equipment necessary to operate in the latter. Requiring BRS licensees to seek special authorization as part of the refarming process will only delay the relocation of BRS and the introduction of AWS. See, e.g., *800 MHz SMR First R&O*, 11 FCC Rcd at 1510 (“[A]ny relocation of an incumbent must be conducted in such a fashion that there is a ‘seamless’ transition from the incumbent’s ‘old’ frequency to its ‘relocated’ frequency (that is, there is no significant disruption in the incumbent’s operations.”).

⁵⁹ *800 MHz Rebanding R&O*, 19 FCC Rcd at 15074.

⁶⁰ *Id.* at 15077. In the 800 MHz rebanding proceeding, the Commission recognized that “[t]he overriding requirement of [the Commission’s] framework is the good faith requirement.”

to review before relocation has commenced, and then confirmed during a “true-up” process at the conclusion of the refarming. WCA proposes that the following approach apply either upon unsuccessful conclusion of a mandatory negotiation, or upon the determination by the BRS incumbent that it desires to self-relocate:

- The BRS incumbent will provide a written, detailed estimate of their costs of migrating to comparable facilities directly to the appropriate F Block AWS licensee.
- Upon its receipt of the notice/estimate, the AWS licensee will have 30 days within which to either: (i) approve the estimate and send the BRS incumbent the funds requested in the estimate; or (ii) ask the BRS incumbent for further clarification of or revisions to those portions of the estimate with which it does not agree. In the latter case, the BRS incumbent will be required to respond with the requested information within ten business days, and the responsible AWS licensee will have ten business days thereafter within which to approve the estimate (including any modifications thereto) and send the funds requested, or take the matter to the Commission for resolution. In any such Commission proceeding, the AWS licensee will bear the burden of proving that the BRS incumbent’s proposed facilities are not comparable or that the estimate exceeds the reasonable cost of deploying those comparable facilities.
- Once the requested funds are received, the BRS incumbent will then commence deployment of the comparable facilities necessary to complete the spectrum refarming.
- Upon completion of that deployment, the BRS incumbent will promptly notify the responsible AWS licensee that it has completed the relocation process and have commenced operations on the new spectrum. In addition, the BRS incumbent must, within 90 days of such notice, provide the AWS licensee with a final accounting of their expenses and monetary reimbursement to the extent the advance payment made by the AWS licensee exceeded the actual cost.
- Upon its receipt of the final accounting, the AWS licensee will have 30 days within which to either: (i) approve the final accounting and send the BRS incumbent any funds to the extent the actual costs incurred exceed the amount previously paid; or (ii) ask the BRS incumbent for further clarification of or revisions to those portions of the final accounting with which it does not agree. In the latter case, the BRS incumbent will be required to respond with the requested information within ten business days, and the responsible AWS licensee will have ten business days thereafter within which to approve the final accounting (including any modifications thereto) and send any funds requested, or present the matter to the Commission for resolution.

IV. ON RECONSIDERATION, THE COMMISSION SHOULD ADDRESS TWO ADDITIONAL PROPOSALS THAT WERE ADVANCED BY WCA IN RESPONSE TO THE *FIFTH NPRM*.

A. *Each F Block AWS Auction Winner Must Reimburse The Entity That Serves As The Transition Proponent Under Section 27.1230 Of The Rules For The Pro Rata Transition Costs Associated With BRS Channels 1 And 2, Consistent With Section 27.1233(c) Of The Rules.*

Under Section 27.1230 of the Commission's Rules, certain costs of transitioning the 2496-2690 MHz band from the current bandplan to the new bandplan (which provides the space that will likely be used to accommodate the relocation of BRS channels 1 and 2 from 2150-2162 MHz) are initially incurred by a "Proponent."⁶¹ However, because the transition to the new bandplan ultimately benefits all other licensees in the 2.5 GHz band, Section 27.1233(c) calls for BRS licensees in the band to reimburse the Proponent a *pro rata* share of the transition expenses.⁶² In so doing, the Commission has sought to avoid "free riders" taking advantage of the Proponents' efforts and assure that those who benefit from the transition to the new bandplan pay their fair share of the costs.⁶³

In its comments in response to the *Fifth NPRM*, WCA urged the Commission to obligate AWS auction winners to reimburse a Proponent the *pro rata* transition costs associated with BRS channels 1 and 2 as a means of achieving that policy objective.⁶⁴ There is no reason why the BRS incumbent licensee at 2.1 GHz should be required to pay those costs – save for its

⁶¹ See 47 C.F.R. § 27.1230. Those costs are limited to the installation of new downconverters at certain EBS receive sites and the migration of certain video programming from channels outside the new Middle Band Segment ("MBS") to channels within the MBS. *Id.* at § 27.1233(a)-(b).

⁶² *Id.* at § 27.1233(c).

⁶³ See *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 *et al.*, Order on Reconsideration and Fifth Memorandum Opinion and Order and Third Memorandum Opinion and Order and Second Report and Order, FCC 06-46, at ¶¶ 157-58 (rel. Apr. 27, 2006) ["*Second Order*"].

⁶⁴ See WCA Comments at 51.

involuntary relocation from the 2150-2162 MHz band it would enjoy absolutely no benefit from the new bandplan at 2.5 GHz and would not have had any obligation to fund that rebanding. However, the issue was not addressed in the *Ninth R&O*. Thus, WCA renews its call that the F Block AWS auction winner pay the BRS channel 1 and 2 *pro rata* share of the costs of the 2.5 GHz bandplan transition in accordance with Section 27.1237 *et seq.* of the Commission's Rules.

B. *The Relocation Of BAS Channel A10 From The 2496-2500 MHz Band Must Be Completed At The Expense Of The AWS Auction Winner.*

In IB Docket No. 02-364, WCA (along with others in the BRS industry) and the Society of Broadcast Engineers (“SBE”) – the primary representative of the BAS community – demonstrated that a substantial impediment to the use of the 2496-2500 MHz band by BRS channel 1 is the current usage of that band by BAS channel A10 for itinerant newsgathering operations pursuant to nationwide licenses because BAS and BRS cannot coexist in the band.⁶⁵ Both BRS and BAS interests called upon the Commission to solve the problem by repacking BAS into just the 2450-2486 MHz band through digitization.⁶⁶ Notwithstanding this unanimity, the Commission's recent *Second Order* rejected their proposal.⁶⁷

SBE has already petitioned the Commission for reconsideration of that decision,⁶⁸ and WCA intends to do likewise. While WCA appreciates that this is not the appropriate proceeding to address the substance of the proposed migration of BAS from the 2145-2500 MHz band, it is the place to address the obligation of the F Group AWS auction winner to assist in the funding of

⁶⁵ See Petition of Wireless Communications Ass'n Int'l, Inc. for Reconsideration, IB Docket No. 02-364, at 19 (filed Sept. 8, 2004) [“WCA 02-364 Petition”]; Petition of Society of Broadcast Engineers for Reconsideration, IB Docket No. 02-364, at 4-5 (filed Sept. 8, 2004). Because BAS often uses channel A10 to transmit from itinerant airborne platforms (such as helicopters and blimps) that would have unobstructed views of BRS receivers, no participant in IB Docket No. 02-364 has seriously contended that BAS and BRS can share the spectrum through coordination.

⁶⁶ *Id.*

⁶⁷ See *Second Order* at ¶¶ 38-42.

that migration. Because refarming of the BAS band benefits the AWS F Block auction winners by affording them relocation spectrum for BRS, the Commission should require that the F Block AWS auction winners fund the repacking of BAS operations to the 2450-2486 MHz band (sharing those costs with Globalstar, the MSS licensee that must also relocate BAS to provide its contemplated terrestrial service).⁶⁹

V. CONCLUSION.

WCA believes that the proposals discussed herein provide a workable blueprint for BRS relocation and should be adopted.

Respectfully submitted,

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⁶⁸ See Petition of the Society of Broadcast Engineers, Incorporated for Reconsideration, IB Docket No. 02-364, *et al.* (filed May 22, 2006).

⁶⁹ See WCA 02-364 Petition at 19-23.

Sec. 27.1132 Interference protection.

(a) All AWS licensees, prior to initiation operations from any base or fixed station, shall follow the provisions of § 27.1255 of this part with respect to incumbent cochannel BRS stations in the 2150-2160/62 MHz band. All AWS licensees are required to coordinate their frequency usage with non-cochannel incumbent BRS stations in the 2150-2160/62 MHz band. Coordination must occur before initiating operations from any base station. Problems that arise during the coordination process are to be resolved by the parties to the coordination. Licensees are required to coordinate with all non-cochannel BRS stations that are within the line-of-sight of the AWS licensee's base station, determined in the manner set forth in §§ 27.1255(a)(1) and (2); or an alternative method agreed to by the parties.

(b) The results of the coordination process need to be reported to the Commission only if the parties fail to agree. Because AWS licensees are required pursuant to § 27.1255(b) to protect BRS licensees in the 2150-2160/62 MHz band, the Commission will be involved in the coordination process only upon complaint of interference from a fixed microwave licensee. In such a case, the Commission will resolve the issues.

(c) In all other respects, coordination procedures are to follow the requirements of § 101.103(d) of this chapter to the extent that these requirements are not inconsistent with those specified in this part.

(d) The AWS licensee must perform an engineering analysis to assure that the proposed facilities will not cause interference to existing non-cochannel BRS stations within the line-of-sight of the AWS licensees' base stations, unless there is prior agreement with the affected BRS licensee. Interference calculations shall be based on the sum of the power received at the terminals of each microwave receiver from all of the applicant's current and proposed AWS operations.

(e) The interference protection criterion shall be such that the interfering signal will not produce more than 1.0 dB degradation of the practical threshold of the BRS receiver for analog systems, or such that the interfering signal will not cause an increase in the bit error rate (BER) from $10E-6$ to $10E-5$ for digital systems. The development of the methods employed to compute the interfering power at the BRS receivers shall follow generally acceptable good engineering practices.