

ORIGINAL

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

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the matter of)
)
Service Rules for the 746-764 and)
776-794 MHz Bands, and)
Revisions to Part 27 of the)
Commission's Rules)
)
)

WT Docket No. 99-168

To: The Commission

REPLY COMMENTS

BellSouth Corporation (hereinafter "BellSouth") hereby files reply comments in the above referenced proceeding.

The Commission's Band Plan

As the Commission knows, BellSouth has been looking at a variety of ways to obtain additional spectrum to alleviate network congestion, provide new and innovative rate plans and services, and meet the needs of Third Generation Wireless. For example, BellSouth has challenged and sought waivers of the Commission's spectrum cap.¹ It also recently sought a waiver of the C and F Block eligibility requirements² (pending with the Commission), as it considers whether to participate in the upcoming re-auction of that spectrum. Similarly,

¹ See *In the Matter of Application for Review of BellSouth Wireless, Inc.; Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap*, WT Docket No. 96-59, *Memorandum Opinion and Order*, 12 FCC Rcd 14031 (1997), *aff'd*, *BellSouth Corporation, et al. v. FCC*, 162 F.3d 1215 (D.C. Cir. 1999).

² See *Petition for Waiver and Expedited Action*, filed by BellSouth Corporation on February 17, 2000, in *In the Matter of BellSouth Corporation Petition for Waivers of the CMRS Spectrum Cap Requirements of 47 C.F.R. § 20.6 and the Eligibility Restriction of 47 C.F.R. § 24.709 for the PCS Frequency Blocks C and F Auction to Begin on July 26, 2000*, DA 00-318.

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BellSouth is looking at the spectrum at issue in this proceeding as it considers whether to participate in the "700 MHz auction."

As part of its effort to obtain additional spectrum, BellSouth has been assessing the extent to which the Commission's plan in this proceeding supports the use of the 700 MHz spectrum for mobile, wireless voice and data services. Obviously, the more easily and compatibly the spectrum can be used for these purposes, the greater the value of the spectrum to potential bidders like BellSouth.

BellSouth is concerned that, as currently written, the Commission's plan may severely limit the utility of the 700 MHz band for mobile operations. BellSouth understands the need for power limits and similar restrictions on the use of spectrum. It does not question the levels or other terms of the Commission's allocation.

However, based on its experience as a wireless carrier, BellSouth is concerned about adjacent-channel interference problems from UHF TV stations even after channels 60 – 69 have been cleared. As shown in Table 1, the current rules require base stations to transmit in the 747 – 762 MHz band, which in turn requires that mobile stations receive in this band:

Table 1³

Stations	Power Limitation
Base stations and Fixed stations operating in the 747-762 band	ERP no greater than 1000 watts; HAAT no greater than 305M
Mobile, fixed, and control stations operating in 777-792 MHz band	ERP no greater than 30 watts
Portable stations operating in 777-792 MHz band	ERP no greater than 3 watts

³ 47 C.F.R. § 27.50 (a).

BellSouth has performed analyses of the impact on several mobile receivers due to high-power UHF TV stations operating on channels 59 and below. These channels fall as close as 1 MHz from the edge of the 700 MHz mobile receiver band. BellSouth has found that, contingent upon the relative geometry between the mobile receiver, the cellular base station, and the TV transmit antenna, substantial interference can occur to mobile receivers due to TV stations operating on channels 59-56. This TV interference can produce large zones in which the mobile receiver will not work.

The interference simulations performed by BellSouth used receiver performance characteristics (such as filtering and carrier-to-interference ratio requirements) that are current, state-of-the-art for mobile receivers, and employed standard methods of interference analysis.⁴

Filters installed in mobile devices such as small handsets, Personal Digital Assistants (“PDAs”), PCMCIA cards, and the like, must necessarily be very small, lightweight, power efficient, and low cost. These constraints, and the extremely high power used by UHF TV stations, preclude the ability of a mobile station from operating in the vicinity of TV stations that are operating on the channels closest to the 700 MHz mobile receive band.

However, base stations may be deployed with significantly better filters than mobile stations because size, power consumption, and cost per filter are not nearly as limiting for base stations as for mobiles. For example, technologies such as super-conducting receiver filters, installed at the base station, can allow very sharp roll-off and high out-of-band attenuation, which will significantly decrease the problem of interference from adjacent-band TV stations.

⁴ TIA/EIA TSB-84A, “Licensed PCS-to-PCS Interference,” 1999.

Because of the handset interference problem, and the better filtering characteristics available for base stations, BellSouth believes the Commission can substantially increase the utility of the spectrum, and therefore its value to potential bidders, by “flipping” the 700 MHz mobile/base allocations as follows:

Table 2

Stations	Power Limitation
Base stations and Fixed stations operating in the <i>777-792 band</i>	ERP no greater than 1000 watts; HAAT no greater than 305M
Mobile, fixed, and control stations operating in <i>747-762 MHz band</i>	ERP no greater than 30 watts
Portable stations operating in <i>747-762 MHz band</i>	ERP no greater than 3 watts

While “flipping” the allocation would not clear every potential interference problem, it would reduce the severity of one major problem (interference to mobiles) that BellSouth has thus far identified.

BellSouth further notes that by “flipping” the allocation, the Commission would bring the 700 MHz band in conformance with long-standing rules,⁵ standards,⁶ and world-wide customs employed for cellular and PCS mobile operations, for which base stations transmit in the upper frequency blocks. This rule change would further simplify the construction of multi-band mobile stations that must operate in two or more of the cellular, PCS, and 700 MHz bands, leading to lower-cost handsets and better roaming capabilities for mobile customers.

⁵ 47 C.F.R. § 22.905.

⁶ TIA/EIA TSB-84A, “Licensed PCS-to-PCS Interference,” 1999.

Negotiations with Incumbent Broadcast Licensees

There clearly are significant spectrum management issues caused by the fact that incumbent broadcasters have years to relocate from this spectrum. These issues somewhat limit the spectrum's attractiveness to prospective bidders.

The Commission has already taken some important steps to help make this spectrum more attractive to potential bidders. For example, it provided new licensees the right to "reach agreement with licensees of protected, incumbent television stations that would compensate incumbents for: (1) converting to DTV-only transmission before the end of the statutory transmission period;[] (2) accepting higher levels of interference than allowed by the protection standards; or (3) otherwise accommodating new licensees.[]"⁷ While these alternatives increase the attractiveness of the spectrum to potential bidders, BellSouth believes the Commission should take additional steps to further increase the attractiveness to potential bidders.

The Commission has extensive experience in establishing rules related to the clearing of spectrum and relocation of incumbent service providers. For example, the Commission found technically appropriate spectrum, and required incumbent microwave licensees to relocate to that spectrum as part of its comprehensive effort to create a new, innovative, and highly successful, personal communications service ("PCS").⁸ As the Commission has previously recognized, however, a few incumbent licensees can attempt to make extreme demands as compensation for moving.⁹ That possibility exists here, too.

⁷ *First Report and Order* at 58, ¶ 142 (footnotes omitted)

⁸ *In the Matter of Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*, ET Docket No. 92-9, *First Report and Order*, 7 FCC Rcd 6886 (1992).

⁹ *See In the Matter of Amendment to the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation*, WT Docket No. 95-157, *First Report and Order*, 11 FCC Rcd 8825, 8848 (1996).

The Commission can make the negotiations between the new 700 MHz licensees and the incumbent TV broadcasters more efficient by allowing a new 700 MHz licensee to negotiate not only with the incumbent TV broadcaster in channels 60-69, but also with incumbent broadcasters or licensees in channels below 60-69 (e.g., channel 45), provided, of course, the lower channels could be used to replicate the incumbent's coverage.

If the new licensee is successful in clearing a lower channel, the Commission should require the incumbent TV broadcast licensee in channel 60-69 to move to the vacated spectrum. In addition to paying whatever was required of the licensee to vacate the lower channel, the new licensee would also be responsible to the incumbent channel 60-69 television broadcaster for its out of pocket costs of moving. This process would be consistent with longstanding Commission precedent interpreting Section 316 of the Act. Since at least 1987, the Commission has indicated that a broadcast licensee on one channel can be moved by the Commission to another channel on an involuntary basis.¹⁰

By increasing the negotiating opportunities for the new licensee, the Commission will have built in a leveling mechanism to avoid unreasonable demands by the incumbent broadcast licensees on channels 60-69. With the auction rescheduled for June 7, 2000,¹¹ the Commission must clarify this area quickly so the potential bidders will be able to incorporate it in their determinations of how much to bid.

Accordingly, the Commission should issue a further notice of proposed rulemaking on this proposal as soon as practicable. The Commission should include a tentative conclusion to

¹⁰ *In the Matter of Modification of FM or Television Licenses Pursuant to Section 316 of the Communications Act Order*, 2 FCC Rcd 3327 (1987).

¹¹ *See 747-762 and 777-792 MHz Band Auction Postponed until June 7, 2000, Public Notice*, DA 00-573, released March 17, 2000.

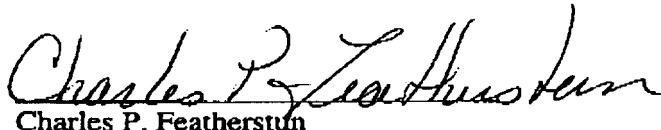
the effect that it should adopt the proposal. In this way, the Commission could signal potential bidders and incumbent broadcasters before the May auction and subsequent negotiations that it is willing to help them through the difficulties ahead in their efforts to relocate the incumbent broadcasters as soon as possible. The Commission could also issue a policy statement on this issue as a further signal of its commitments in this area.

CONCLUSION

For the reasons stated above, the Commission should alter the 700 MHz mobile/base allocation as indicated above in Table 2. Further, it should make it clear, as soon as possible, that if a new licensee is able to negotiate with a broadcaster or licensee of spectrum on the channels below 60-69 to free up this spectrum, then the Commission will require the incumbent broadcaster on a channel between 60-69 to move to the lower channel, provided it can be used to replicate that broadcaster's coverage and the new licensee pays the out of pocket costs of the incumbent broadcaster to move.

Respectfully submitted,

BELLSOUTH CORPORATION



Charles P. Featherstun

David G. Frolio

1155 Peachtree Street, N.E., Suite 1800

Atlanta, GA 30309-3610

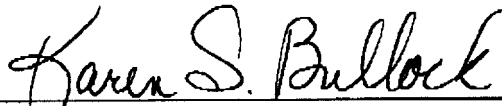
(404) 249-3855

Its Attorneys

March 17, 2000

CERTIFICATE OF SERVICE

I do hereby certify that I have this 17th day of March 2000 served the following parties to this action with a copy of the foregoing BellSouth Reply Comments by hand delivery or by placing a true and correct copy of the same by U.S. mail, addressed to the parties listed on the attached service list.



Karen S. Bullock

Service List – WT Docket No. 99-168

Magalie Roman Salas*
Secretary
Federal Communications Commission
The Portals, 445 Twelfth Street, S.W.
Room TW-A325
Washington, D.C. 20554

ITS, Inc.*
The Portals, 445 Twelfth Street, S.W.
Room CYB400
Washington, D.C. 20554

Kenneth J. Wees
Vice President, General Counsel & Secretary
Adaptive Broadband Corporation
1143 Borregas Avenue
Sunnyvale, CA 94089

Victor Tawil
Senior Vice President
The Association for Maximum Service
Television, Inc.
1776 Massachusetts Ave., N.W.
Washington, D.C. 20036

Joan M. Griffin
Winafred Brantl
Kelley, Drye & Warren LLP
1200 19th Street, N.W.
Suite 500
Washington, D.C. 20036

Jonathan D. Blake
Ellen P. Goodman
Stanford K. McVoy
Covington & Burling
1201 Pennsylvania Ave., N.W.
Washington, D.C. 20044

Attorneys for Adaptive Broadband Corporation

*Attorneys for the Association for
Maximum Service Television, Inc.*

Peter Carson
Vice President, Business Development
ArrayComm, Inc.
3141 Zanker Road
San Jose, CA 95134

David L. Donovan
Vice President, Legal & Legislative Affairs
Association of Local Television Stations, Inc.
1320 19th Street, N.W.
Suite 300
Washington, D.C. 20036

Robert M. Gurs
Shook, Hardy & Bacon, LLP
600 14th Street, N.W.
Suite 800
Washington, D.C. 20005

Kevin J. Kelley
Senior Vice President, External Affairs
QUALCOMM Incorporated
2000 K Street, N.W.
Suite 375
Washington, D.C. 20006

*Attorneys for Association of Public-Safety
Communications Officials-International, Inc.*

Service List – WT Docket No. 99-168

Henry L. Baumann
Jack N. Goodman
Jerianne Timmerman
National Association of Broadcasters
1771 N Street, N.W.
Washington, D.C. 20036

Albert J. Catalano
Catalano & Plache, PLLC
3221 M Street, N.W.
Washington, D.C. 20007

Attorneys for Nelson Repeater Services, Inc.

Theresa A. Zeterberg
Cole, Raywid & Braverman, LLP
1919 Pennsylvania Ave., N.W.
Second Floor
Washington, D.C. 20006

Attorneys for Northcoast Communications, LLC

Julia Kane
US WEST Wireless, LLC
1020 19th Street, N.W.
Suite 700
Washington, D.C. 20036

Norman P. Levanthal
Walter P. Jacob
Leventhal, Senter & Lerner, P.L.L.C.
2000 K Street, N.W., Suite 600
Washington, D.C. 20006

Attorneys for TRW, Inc.

Veronica M. Ahern
Nixon, Peabody, LLP
One Thomas Circle, N.W.
Suite 700
Washington, D.C. 20005

Attorneys for QUALCOMM Incorporated

Henry Goldberg
Jonathan L. Wiener
Goldberg, Godles, Wiener & Wright
1229 19th Street, N.W.
Washington, D.C. 20036

Attorneys for Rand McNally & Company

Deborah Lipoff
Vice President & General Counsel
Rand McNally & Company
8255 North Central Park
Skokie, IL 60076

Raul R. Rodriguez
Stephen D. Baruch
Juan F. Madrid
Leventhal, Senter & Lerner, P.L.L.C.
2000 K Street, N.W., Suite 600
Washington, D.C. 20006

Attorneys for TRW, Inc.

Richard C. Barth, Ph.D.
Vice President and Director,
Telecommunications Strategy
Motorola
1350 I Street, N.W., Suite 400
Washington, D.C. 20005

Service List – WT Docket No. 99-168

Peter Cramton
Chairman
Spectrum Exchange Group, LLC
4405 Holly Hill Road
Hyattsville, MD 20742

John T. Scott, III
Crowell & Moring LLP
1001 Pennsylvania Ave., N.W.
Washington, D.C. 20004

Attorneys for Bell Atlantic Mobile, Inc.

Stan Wiggins*
Policy Division
Wireless Telecommunications Division
Federal Communications Commission
445 12th Street, S.W.
Room 3-A160
Washington, D.C. 20554