BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service ("WCS")	)	GN Docket No. 96-228

REPLY COMMENTS

Pursuant to Section 1.415 of the Commission's Rules,[1] Alcatel Network Systems, Inc. ("ANS"),[2] by its attorney, hereby replies to certain comments on the Commission's above-captioned Notice of Proposed Rule Making ("NPRM").[3] In this NPRM, the Commission proposes establishing a new Wireless Communications Service ("WCS") in the 2305-2320 and 2345-2360 MHz bands; auctioning WCS licenses; and permitting WCS licensees to offer any fixed, mobile, radiolocation or satellite Digital Audio Radio service provided it is consistent with applicable international regulations.[4]

In its comments, ANS strongly opposed the Commission's approach to the new WCS. The proposed open co-primary licensing of the 2.3 GHz band by fixed, mobile and other services is fundamentally flawed. Inadequate technical rules would be imposed. Necessary interference

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[1]47 C.F.R. §1.415 (1996).

[2]ANS is a wholly-owned subsidiary of Alcatel Alsthom ("Alcatel"), one of the world's largest corporations (with annual sales in excess of $30 billion) and the world's largest manufacturer and supplier of telecommunications equipment. In particular, Alcatel is the world's largest independent manufacturer and supplier of microwave radios. Formerly Collins Radio and Rockwell International, ANS, with close to $1 billion in annual sales, is a world leader in manufacturing microwave and light wave transmission systems. ANS' equipment is used for a wide range of services, including short, medium and long-haul voice, video and data transmission. Its microwave customers include all the Bell Operating Companies, most major independent telephone companies, cellular operators, power and other utility companies, oil companies, railroads, industrial companies, and state and local government agencies.

[3]Attachment A lists the parties whose comments are addressed and the abbreviations used herein for these parties.

[4]NPRM at ¶1.

protection standards would be missing. Precise service guidelines for equipment product development would be unavailable. Comity between U.S. and international systems would be threatened. Furthermore, reliance upon auctions to determine what services would be provided contravenes the Commission's statutory responsibilities and flies in the face of sound spectrum management principles. Consequently, as demonstrated herein, the record of this rulemaking strongly supports ANS' objections and thus the Commission must reconsider its proposed approach to allocating and licensing the 2.3 GHz band.

THE FCC'S OPEN LICENSING PROPOSAL IS UNACCEPTABLE

A. The Proposed Open Licensing Scheme Will Not Work

ANS opposed the Commission's proposed open-licensing proposal for co-primary use of the 2.3 GHz band by fixed, mobile or other services:

> Service in these bands would be a "free-for-all" because technical and operating rules are not proposed. Reliance upon market negotiations instead of on industry-developed, service-specific technical standards, would be disastrous. Chaos would result.[5]

These concerns are not isolated. Omnipoint fears that the "completely open-ended wireless service could actually backfire and disserve the public."[6] Sprint indicts the proposal because it "would discourage service innovation and efficient spectrum utilization, and would undercut the significant strides the Commission has made in encouraging a robust, competitive [wireless] industry."[7] AirTouch, in its comments,

> urges the Commission to follow an efficient spectrum management policy, rather than the unbridled service flexibility proposed in [the NPRM]. The

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[5]ANS at 2.

[6]Omnipoint at 2.

[7]Sprint at 2-3. See also ADC at 14-15; BellSouth at 3; CTIA at 5; ITA at 5; PCIA at 2.

> FCC should limit the services that can be offered in a single band or channel block in order to promote effective use of the allocation.[8]

Several parties fear that the open approach would retard, rather than promote, competitive, viable services.

> [The proposal] will fail to provide manufacturers the requisite information to begin development of applicable technologies and equipment. Consequently, the failure to allocate the spectrum to a particular service will substantially slow the use of the spectrum and unnecessarily delay the deployment of innovative technologies.[9]

B. Safeguards Against Harmful Interference Are Needed

A serious problem with the Commission's proposal is that it does not specify co-channel or adjacent channel interference criteria. These criteria are essential given the potential for so many different co-primary radio services:

> WCS licensees would not be assured protection against harmful interference from non-compatible adjacent or co-channel licensees. Benign band-sharing by disparate users would be difficult and costly to achieve. Product costs would skyrocket.[10]

TIA characterizes this problem as an "intolerable situation [that] would only deteriorate under the Commission's plan to auction off spectrum for competing uses to the highest bidder."[11] Motorola accurately details the pitfalls that will result if the Commission's proposal is adopted:

> This method of "spectrum management" has other potentially grave consequences as well. It is not at all clear how the Commission hopes to minimize interference under its proposal to mix any and all fixed, mobile, radiolocation and satellite digital audio radio services throughout the bands. Optimizing each of these services for success requires a given set of infrastructure implementation, equipment powers, receiver performance and

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[8]AirTouch at 2.

[9]CTIA at 2. See also Lucent at 4; TIA at 13; PrimeCo at 4; ITA at 6. Indeed, Lucent and TIA note that the Commission's General Wireless Communications Service in the 4 GHz band, which has an open-ended approach like the proposed WCS, has not been successful and that little or no equipment for this spectrum has been developed. Lucent at 5; TIA at 14.

[10]ANS at 2.

[11]TIA at 11.

> a myriad of other technical parameters. Given the wide range of these parameters, perfectly legal transmitters for a given application could cause harmful interference to the receivers of another. Out of the gate, operators face increased risks of interference compared to alternative approaches which consider the viability of successful coexistence among defined services. All services would be co-primary, so all licensees would have the same rights. Significant Commission involvement to resolve disputes is inevitable under such a chaotic approach.[12]

C. Product Development Would Be Stifled

Radio development and production for these bands would be stifled if the NPRM were to be adopted. Research and development costs would increase because of manufacturers' doubts over how the bands would be used; their need to overcompensate in designing interference protection standards, in an uncontrolled environment, to address all such possible uses; and their uncertainty over potential market demand and related production and performance requirements.[13]

Numerous parties share ANS' concerns. ITA effectively describes why the Commission's approach threatens product development:

> From the standpoint of equipment manufacturers, the more definition given to a radio service, the more predictable is the equipment required to implement the service. The Wireless Communications Service, of necessity, will be defined in broad and generic terms. As a result, equipment manufacturers will have little ability to anticipate the type of equipment required by service providers and even less opportunity to incorporate cost-saving designs from other lines of equipment. Equipment costs will be higher and production times longer.[14]

TIA states that:

> [w]ithout any clear guidance as to what type of services will ultimately be provided, it is unlikely that any manufacturer will begin the costly product

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[12]Motorola at 6-7. See also ADC at 14; AirTouch at 3-4; Harris at 3; SBC at 3.

[13]ANS at 2.

[14]ITA at 7. See also Vanguard at 2-3; Harris at 3; ADC at 15; CTIA at 1-2.

> design and development process for equipment in this band, at least not until it is certain who wins the auction and what service they decide to provide.[15]

Lucent notes that "failure to provide manufacturers with product development guidance through proper use allocation will preclude the efficient and intensive use of the spectrum because licensees will have spectrum but no means of utilizing it."[16] PCIA concludes that "equipment manufacturers will be unable to develop sensible business plans to guide their research and development efforts."[17]

Given these inherent problems, AirTouch details how the Commission's proposal would impact an equipment consumer:

> Moreover, "full flexibility" will slow, and possibly prevent, the delivery of services to the public. If licensees can provide fixed, mobile, broadcasting-satellite, radiolocation, or a mix of such services over WCS spectrum, manufacturers are unlikely to develop products for use on these frequencies until licenses are awarded and licensees announce their planned uses for spectrum. A manufacturer will not invest millions in developing a handset for two-way voice communication over 2.3 GHz because there is no guarantee that there will be a market for the equipment. The development of new, innovative equipment is useless if it is not compatible with the technologies used by various licensees. At a minimum, the proposed regulatory scheme likely will increase the cost of equipment, including CPE, because equipment will have to be designed not to interfere with numerous service offerings provided over the same spectrum.
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> A "full flexibility" regulatory scheme does not establish the technical compatibility standards needed to encourage the development of new equipment and applications and the subsequent adoption of standards may become virtually impossible if numerous services can be offered over the same spectrum. Standardization creates economies of scale in the provision of subscriber equipment and infrastructure, as well as roaming. The absence of such standards inevitably leads to incompatible networks and equipment, interference service disruption, and public safety problems. If, however, the

[15]TIA at 13.

[16]Lucent at 3.

[17]PCIA at 5.

> Commission were to adopt industry-created technical guidelines and assign WCS spectrum for a limited number of flexible uses, compatible networks could be designed and interference and public safety problems resolved. Manufacturers would be able to develop equipment based on the technical guidelines and primary use requirements. Thus, limited service flexibility, coupled with general technical guidelines, would spur the development of new equipment and deployment of new services.[18]

D. International Markets Could Be Lost

Open availability of international markets is critical for U.S. equipment manufacturers. Inter-operability of devices in the U.S. and in other countries is essential. Unfortunately, among the myriad problems that would result from the Commission's open-ended licensing approach is a dysfunctional relationship between 2.3 GHz band services available in the U.S. and available overseas:

> Many developers look to national and international markets to recover their development expenses. With different areas of the spectrum available in different markets, devices must be built to survive under any condition, in any electromagnetic environment. Devices sold to new markets may be inoperable in those locations. Since many other countries use Commission regulations as a model for their own technical and operating requirements, the international market for devices operating in the 2.3 GHz band would be just as chaotic as it would be domestically.[19]

TIA takes a similar position. It warns the Commission that "there must be standardized equipment allocations, not only nationwide, but increasingly worldwide, so that equipment manufacturers can produce, at low cost, standardized equipments for larger markets."[20]

USING AUCTIONS TO ASSIGN RADIO SERVICES IS UNLAWFUL AND CONTRARY TO THE PUBLIC INTEREST

To the highest bidder will go the spoils. Under the proposal in the NPRM, winning bidders, not the Commission, will have the right to select how the frequencies will be used. By proposing to confer this right on WCS licensees, the Commission impermissibly would substitute the

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[18]AirTouch at 4-5.

[19]ANS at 4-5.

[20]TIA at 13.

marketplace for its independent statutory obligation under Section 303 of the Communications Act of 1934, as amended,[21] to make specific allocations.[22]

ANS, in its comments, demonstrated that: (i) the Commission does not have unlimited authority to auction spectrum; (ii) spectrum allocation and frequency assignment are not among the permitted uses for competitive bidding; (iii) the Commission is prohibited from assigning a band of frequencies for licensed operations "on the expectation of Federal revenues from the use of a system of competitive bidding[;]" and (iv) use of competitive bidding cannot substitute for the Commission's "obligation in the public interest to continue to use engineering solutions, negotiation, threshold qualifications, service regulations, and other means" to assign how specific frequencies are to be used.[23]

> If the NPRM is adopted, the licensees will take over the Commission's responsibility of determining what services should be made available over specific bands, how those services would be provided, and what technical standards, if any, would be enforced. Thus, by delegating these responsibilities to the licensees and by foregoing a proper assessment of the relative value of the different radio services that might be established on the bands under consideration, the Commission would abdicate its responsibility under the Act to allocate the use of the radio spectrum as required by the public interest, convenience, and necessity.[24]

Numerous other parties agree. TIA declares that, "[t]hrough its WCS proposal, the Commission would violate . . . [its] bedrock principles [and] allocation of the 2.3 GHz band would be a function of the outcome of the auction process, and would not be based on a reasoned analysis

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[21]47 U.S.C. §303 (1996).

[22]ANS at 2.

[23]ANS at 5 citing 47 U.S.C. §309(j)(6) (1996).

[24]ANS at 5-6.

of the public interest, as the law requires."[25] Motorola expresses serious concern over this emerging frequency assignment policy:

> [T]he Commission's NPRM in this proceeding proposes to allow auction winners essentially to determine how the spectrum will be allocated. Under the proposal, each licensee would have full flexibility to offer any fixed, mobile, radiolocation or satellite digital audio radio service.
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> Motorola is concerned that this spectrum management approach could unintentionally bring serious damage to the U.S. telecommunications industry. The direction set forth by Congress and the rules proposed by the Commission at 2.3 GHz hold a high risk of fracturing the market, thereby retarding investment in systems both by operators and manufacturers. At best, this revenue driven approach is an isolated departure from a successful formula. At worst, it signals a disturbing trend in U.S. spectrum management likely to yield an unsuccessful track record which is atypical of the telecommunications industry. Left unabated, such a trend could affect the U.S. telecommunications industry's stature in both the domestic and global markets. Just as past success has increased employment, future failure can reduce it.[26]

BellSouth concurs. It "opposes the complete flexible use proposed by the Commission for the new wireless spectrum and believes that the Commission should not simply allow the WCS auction to govern the use of the spectrum."[27] Lucent declares that this proposal "endangers the fulfillment of [the Commission's] spectrum management responsibilities and undermines the goals of its market-oriented policies."[28] CTIA advocates designating particular services before auctions are conducted.[29]

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[25]TIA at 6.

[26]Motorola at 3.

[27]BellSouth at 2. See also PrimeCo at 8-9; Omnipoint at 6; Harris at 2-4; CEMA at 2; ITA at 4-6; AAR at 7.

[28]Lucent at 3.

[29]CTIA at 1-2.

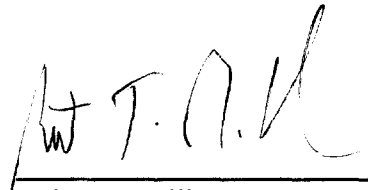
CONCLUSION

While ANS and most other commenters support allocation of the 2.3 GHz band, serious reservations exist concerning how this allocation will be implemented. The Commission is obligated to listen to this record before adopting any rules for this band.

Notwithstanding the fact that the Commission is under time pressure from Congress to allocate this band,[30] these requirements do not justify the proposed open-ended licensing scheme. Instead, serious consideration must be given to partitioning this band for specific services and to establishing technical and operating requirements, including interference protection standards, that would promote optimal use.

Respectfully submitted,

ALCATEL NETWORK SYSTEMS, INC.



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273902/gw03

[30] See Omnibus Consolidated Appropriations Act, 1997, P.L. 104-208, 110 Stat. 3009 (1996).

ATTACHMENT A

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AirTouch Communications, Inc. ("AirTouch")

Association of American Railroads ("AAR")

BellSouth Corporation ("BellSouth")

Cellular Telecommunications Industry Association ("CTIA")

Consumer Electronics Manufacturers Association ("CEMA")

Harris Corporation-Farinon Division ("Harris")

Industrial Telecommunications Association, Inc. ("ITA")

Lucent Technologies Inc. ("Lucent")

Motorola Inc. ("Motorola")

Omnipoint Corporation ("Omnipoint")

Personal Communications Industry Association ("PCIA")

PrimeCo Personal Communications, L.P. ("PrimeCo")

SBC Communications Inc. ("SBC")

Sprint Spectrum L.P. d/b/a Sprint PCS and Sprint Corporation ("Sprint")

Telecommunications Industry Association, Fixed Point-to-Point Communications and Private Radio Sections ("TIA")

Vanguard Cellular Systems, Inc. ("Vanguard")

CERTIFICATE OF SERVICE

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