

BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554

In the Matter of	)	
	)	
Amendment of Part 2	)	ET Docket No. 00-258
Of the Commissions 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	)	
	)	
Petition for Rulemaking	)	
Of the Cellular Telecommunications	)	RM-9920
Industry Association Concerning	)	
Implementation of WRC-2000	)	
Review of Spectrum and	)	
Regulatory Requirements	)	
For IMT2000	)	
	)	
Amendment of the U.S.	)	
Table of Frequency Allocations	)	RM-9911
To Designate the 2500-2520/	)	
2670-2690 MHz Frequency	)	
Bands for the Mobile -	)	
Satellite Service	)	

**TABLE OF CONTENTS AND SUMMARY  
OF COMMENTS OF  
TELEPHONE AND DATA SYSTEMS, INC.**

Summary .....i

I.	The FCC Must Allocate Adequate Spectrum to 3G To Encourage the Growth of A Vibrant National Network .....	2
II.	The FCC Must Define 3G Market Areas In A Way Which Permits Existing Wireless Carriers To Provide 3G Service To Customers .....	4
III.	Spectrum Must Be Allocated Quickly And Existing Uses Must Be Cleared From Such Spectrum .....	7
IV.	U.S. Competitive Advantage And Harmonization With the Rest of The World Should Guide The FCC In Making Spectrum Allocations .....	9
V.	Only Wireless Carriers Should Be Able To Offer 3G Services Without Obtaining New 3G Frequencies In Auctions.....	11
	Conclusion .....	11

## Summary

Telephone and Data Systems, Inc. ("TDS") urges the FCC to allocate sufficient spectrum to create a vibrant national 3G network. TDS would suggest a minimum of 180 MHz (30 MHz per wireless carrier per market) of new spectrum should be authorized for 3G use, as that would permit six carriers in each market to offer the full array of 3G services.

Equally importantly, the FCC must define 3G markets in small enough areas to permit small, mid-sized, and rural wireless carriers to obtain new 3G spectrum and provide service. Specifically, TDS recommends that Basic Trading Areas ("BTAs") be used and, in any case opposes the use of Major Trading Areas ("MTAs") as were used for the A and B Blocks for Broadband PCS or Economic Area Groupings, as have been chosen for the upcoming 700 MHz auctions.

The FCC must move quickly to allocate 3G spectrum and to clear those existing usages which are not compatible with the 3G service from the newly allocated 3G bands. TDS believes that the microwave clearance process employed in the PCS service will furnish a good model for Commission rules in this proceeding.

In determining the frequency bands to be allocated to the 3G service, the FCC should be guided by the principles of harmonizing US 3G frequencies, to the extent possible, with those used by our trading partners. The national interest,

rather than the private interests of certain carriers, should control the FCC's deliberations.

Finally, wireless carriers should be allowed and encouraged to provide 3G service within their existing frequency authorizations as well as being able to apply for new 3G frequencies in the auction process. However, other licensees in other radio services should not be able to abandon their existing public interest responsibilities on their present frequencies to provide 3G wireless service, though they are also eligible to apply to provide 3G service in the auction process.

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**COMMENTS OF TELEPHONE  
AND DATA SYSTEMS, INC.**

Telephone and Data Systems, Inc. ("TDS"), hereby files its Comments in response to the Notice of Proposed Rulemaking and Order ("NPRM"), FCC 00-455, released January 5, 2001, in the above-captioned proceeding. TDS is a provider of wireline telephone and wireless service through its subsidiaries TDS Telecom, Inc. ("TDS Telecom")<sup>1</sup> and United States Cellular Corporation ("USCC").<sup>2</sup>

For the reasons given below, TDS urges the FCC to move expeditiously to designate additional spectrum for third generation wireless ("3G") services. TDS also asks the FCC to define the market areas within which 3G service will be offered in a way which will permit small and mid-sized companies, including existing small market cellular licensees, to participate in the auctions and secure licenses.

I. The FCC Must Allocate  
Adequate Spectrum to 3G  
To Encourage the Growth  
of A Vibrant National Network

As is noted in NPRM (¶ 28), a central question in this proceeding is:

"how much additional spectrum will be needed to satisfy unmet and projected mobile requirements such as toll quality voice, high speed data including Internet and other multimedia applications, and full motion video."

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<sup>1</sup> TDS Telecom currently serves approximately 731,000 access lines through 106 subsidiary companies in 28 states.

<sup>2</sup> USCC serves approximately three million customers in 45 Metropolitan Statistical Areas and 102 Rural Service Areas. TDS, in both its wireline and wireless entities, has chosen to concentrate on the provision of service to rural America.

At this point, it is difficult to determine precisely how much new spectrum will be needed to achieve those ambitious goals, which are spelled out in greater detail at Footnote 44 to the NPRM. The NPRM notes (§ 26) that the International Telecommunication Union ("ITU") "has determined that 160 megahertz of spectrum will be needed by 2010 for IMT-2000," or 3G.

TDS would suggest that the FCC approach this problem from the standpoint of carrier needs. TDS estimates that within the next decade each wireless carrier will need as much as 30 MHz of new spectrum in each market to provide the new voice, data, and video services usually described as "3G."

As the Commission has noted in the current "automatic roaming" proceeding, there are now six wireless "national" carriers, as well as many regional and small market cellular and PCS operators.<sup>3</sup> TDS believes it to be reasonable as a working assumption that most of the relatively populous regions of the country will have at least six wireless competitors within the next decade, which will need additional spectrum to implement 3G services. In order to implement the 3G services specified in the NPRM, given the inevitable increase in demand for existing "2G" and "2.5G" wireless services, TDS estimates that approximately 30 MHz per licensee will be necessary. Thus, TDS would consider that a minimum of 180 MHz of spectrum should be allocated for 3G purposes.

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<sup>3</sup> See In the Matter of Automatic and Manual Roaming Obligations Pertaining to Commercial Mobile Radio Services, WT Docket No. 00-193, Notice of Proposed Rulemaking, released November 1, 2000, § 11. The national carriers are AT&T Wireless, Sprint PCS, Nextel, Verizon Wireless, Voicestream and Cingular Wireless.

By allocating that amount of spectrum, the FCC would facilitate existing cellular and PCS licensees being able to provide 3G services as a natural outgrowth of their existing services – provided they are able to secure additional spectrum for 3G purposes.

At ¶¶ 22-23, the NPRM asks comment on the ability of wireless licensees to "transition" to 3G services within their existing spectrum. Though improved use of wireless spectrum is always desirable, it is not clear at present the extent to which this can be done without impinging on existing service. And the FCC, for present planning purposes, should assume, in accordance with the view of the ITU, that additional spectrum will be necessary. The FCC should also bear in mind that allocating presently occupied spectrum to 3G will only grow more difficult over time.

Presumably, wireless licensees will not participate in 3G auctions unless they believe they need more spectrum to offer full 3G service. Having spent the money for additional spectrum will act as a spur to such licensees to develop the additional services for which the added spectrum will be necessary.

II. The FCC Must Define 3G Market  
Areas In A Way Which Permits  
Existing Wireless Carriers To  
Provide 3G Service to Their Customers.

One subject not mentioned in the NPRM but crucial to this proceeding is the definition of 3G service areas. TDS would maintain that it is essential to the achievement of important statutory objectives and to basic fairness that the

Commission define 3G service areas in a manner which permits small and mid-sized carriers to provide 3G service to their present customers while continuing to provide improved versions of existing services.

TDS notes with concern the steady enlargement of wireless service areas in recent proceedings. Cellular markets were defined by Metropolitan Statistical Areas ("MSAs") and Rural Service Areas ("RSAs"), which permitted the emergence and growth of small and regional systems. For broadband PCS, the FCC designated multistate Major Trading Areas as the markets for A and B Block licensees. However, the Commission also offered Basic Trading Area ("BTA") licenses to C, D, E, and F Block PCS licensees, which permitted small and mid-sized carriers to participate.

Evidently tiring of the administrative complexities of small market licensing, the FCC, in its upcoming 700 MHz auction, will, if the relevant rule is not changed, auction licenses on an Economic Area Grouping ("EAG") basis. These six enormous service areas, which can encompass up to 40 million people, will, in practical terms, be off limits to all applicants except the largest carriers, which largest carriers will also benefit by the exemption of the 700 MHz spectrum of the wireless spectrum cap.<sup>4</sup>

TDS has opposed the FCC's choice of EAGs for 700 MHz licensing<sup>5</sup> and plans to renew its opposition prior to the 700 MHz auction, now scheduled for September 12, 2001. However, if the FCC does maintain its existing 700 MHz market

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<sup>4</sup> See Sections 27.6 (b)(2) and 27.12 of the FCC's Rules.

<sup>5</sup> See Ex Parte letter of TDS in WT Docket No. 99-168, filed December 22, 1999.

definition, it will make it all the more important that the Commission create new opportunities for small and mid-sized carriers to provide 3G services through appropriate market area definitions.

TDS would also note that defining relatively small 3G service areas is not just a matter of justice to smaller carriers. It is an issue of statutory obligation as well.

Section 309 (j)(3)(A-B) of the Communications Act [47.U.S.C. Section 309 (j)(3)(A-B)] requires the FCC to promote "...the development of new technologies, products and services for the benefit of the public...in rural areas "and" ...[to ensure that] new and innovative technologies are readily accessible to the American people...by disseminating licenses among a wide variety of applicants." Section 309(j)(4)(c) of the Act [47.U.S.C. Section 309 (j)(3)(A-B)] requires the Commission to promote equitable distribution of licenses and service among geographic areas, economic opportunity for a wide variety of applicants, and rapid development of new technologies and services. Taken together, these provisions establish both general and specific requirements for the Commission to design spectrum auctions to enhance opportunities for new and innovative services in rural areas. To license 3G service with the same market structure as the 700 MHz service would contravene that statutory mandate.

Smaller service areas would also serve the public interest in other practical ways. By permitting existing cellular and PCS licensees to obtain 3G spectrum, the Commission would encourage a natural evolution toward 3G from existing wireless

service. Also, using smaller service areas would encourage all applicants to structure their proposals realistically, focusing on practical and achievable proposals and on filling in gaps in their present service areas.

TDS has no objection to bidding credits for small and very small businesses structured along the lines of present Section 24.709 of the FCC's rules. However, TDS would maintain that all 3G spectrum should be open to all applicants. As noted above, it is far more important to small business that market sizes be correct than that they receive reserved spectrum within service areas too large to serve.

Finally, with respect to service area definitions, TDS believes that licensing 3G by BTA would offer the best hope of meeting the goals of fairness, promotion of innovation and practicality.

But, whether or not BTAs or some other relatively small service areas are selected, TDS considers it vital that the FCC reverse the trend toward ever larger wireless service areas. If the FCC does not ensure an opportunity to obtain 3G licenses by small, mid-sized and rural operators, including minority owned and women operators, it is unlikely to ever happen.

**III. Spectrum Must Be Allocated  
Quickly And Existing Uses  
Must Be Cleared From Such Spectrum**

TDS urges the FCC to establish as central principles in this proceeding that the necessary auctions for 3G authorizations must take place quickly and that whatever bands are chosen must be speedily cleared, if necessary.

The FCC has before it recent examples of both how to and how not to accomplish the licensing and relocation process. The positive example is undoubtedly the broadband PCS licensing and microwave relocation process set out in Sections 24.202-238 and 24.239-253 of the Commission's Rules.

Critical to the PCS licensing process were clear licensing timetables and construction milestones, combined with reasonable time periods for negotiating microwave relocation under fair, agreed upon standards for reimbursing microwave licensees for moving to new frequencies. That process should be the model for relocating those incumbent facilities which must make way for new 3G spectrum.<sup>6</sup>

By contrast, the FCC must avoid the difficulties which have plagued and will continue to plague the 700 MHz licensing process. What has caused two auction postponements already and what may prevent any effective licensing of that spectrum is the fact that the Channel 60-69 broadcaster incumbents need not vacate the relevant spectrum until December, 2006 -- and only then if 85% of the viewing public in a given market have digital television, which may never occur in some or all markets.<sup>7</sup>

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<sup>6</sup> Any necessary relocation of government-owned stations will also be subject to reimbursement requirements under the statutes referred to at ¶¶ 42, 45 and 48 of the NPRM.

<sup>7</sup> See Sections 336-337 of the Communications Act [47 U.S.C. Sections 336-337]; First Report and Order in WT Docket 99-168, 15 FCC Rcd 476, 534 (2000); Section 309 (j)(14)(B) [47 U.S.C. Section 309 (I)(14)(B)].

It is obvious that no applicant would wish to spend millions of dollars in an auction for "encumbered" spectrum. This is especially the case for small and mid-sized carriers. While the largest carriers may have the resources to "stockpile" spectrum for the future, smaller carriers lacking substantial resources obviously cannot do so.<sup>8</sup>

It is urgently necessary that the FCC act decisively to grant unencumbered spectrum to auction winners.

IV. U.S. Competitive Advantage  
And Harmonization With  
The Rest of the World  
Should Guide The FCC  
In Making Spectrum Allocations

The most difficult task that FCC faces in this proceeding is deciding which frequency bands or segments of bands will be made available for 3G use. It appears likely that the 1710-1755 MHz band will be made available for 3G use beginning in 2004 (NPRM, ¶40). Also, it is probable that the 2110-2150 MHz and 2160-2165 MHz bands will be made available for the 3G use. The present governmental and common carrier microwave users of those bands will receive compensation under procedures which should be similar to the PCS/private microwave procedures.

However, the crucial battle will be fought in this proceeding over whether part or all of the 1755-1850 MHz and/or 2500-2690 MHz bands should be made available for 3G use.

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<sup>8</sup> Also obviously, any encumbrances on auctioned spectrum will reduce the amounts the

TDS takes no position on precisely which frequencies from those bands should be made available for 3G use. The issues involved are technical and complex, particular in regard to the military spectrum usage involved in the 1755-1850 band and the FCC must bring its own, and other governmental and industry expertise to bear in arriving at a fair solution.<sup>9</sup>

However, TDS would urge the FCC, in deciding this issue, to bear in mind the goal of harmonizing, to the extent possible, US frequency usages with those of our most important trading partners, in order to help achieve efficiencies and economies of scale within in an increasingly globalized market.

The Commission should not, we submit, be unduly influenced by political pressure from licensees which simply do not want to move their operations. The FCC must focus on the long term best economic interests of the country. Having a strong wireless mobile communications sector, including high speed data, is crucial to US competitiveness and such mobile systems have to operate on the relatively lower frequency bands, similar to the PCS band ( 1850-1990 MHz). As long as existing non-mobile licensees on such hands are compensated and receive reasonably comparable facilities on workable frequency bands, they will suffer no detriment.<sup>10</sup>

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Treasury will receive in payment for the spectrum.

<sup>9</sup> In that connection, TDS would note the tentative conclusion in reports prepared by wireless organizations that there may be considerable possibilities for sharing the 1755-1850 MHz band between 3G and existing government uses.

<sup>10</sup> Though again while TDS takes no position on what specific frequencies should be allocated to 3G, it would again note the importance of allocating frequencies under 3 GHz to mobile services, which cannot operate efficiently at frequencies above 3 GHz and the prevalence of fixed microwave services, which could presumably operate in higher frequency bands, in the 2500-2690 MHz range. Also, over the long run, fiber may prove a better option for such services. The FCC should, perhaps

V. Only Wireless Carriers Should  
Be Able To Offer 3G Services  
Without Obtaining New  
Frequencies In Auctions

An issue referred to in the ¶64 of the NPRM will be a critically important one in this proceeding, namely which licensees will be eligible to offer advanced wireless services and under what circumstances?

Nothing could be better calculated to undermine the integrity of a 3G auction than the possibility that existing licensees with non-mobile licenses could use portions of their present non-mobile frequency allocations (for example, in the 2500-2690 MHz band) to provide 3G services, while current wireless licensees will have to spend millions to obtain additional spectrum to do so. The government cannot allow such non-mobile licensees to take what is public property and convert it to a mobile use without going through an auction process.

3G is a wireless service and should be offered either on existing wireless frequencies or new 3G frequencies. Other licensees have other public interest responsibilities, and should not be allowed to abandon those responsibilities to provide 3G service.

Conclusion

For the foregoing reasons, the FCC should move expeditiously to designate adequate spectrum for 3G uses, should allocate that spectrum quickly, and should

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in this proceeding, encourage carriers to consider what may be the best and most efficient uses of the radio spectrum under 3 GHz for the 21<sup>st</sup> century.

define service areas in a manner that permits small, mid-sized, and rural carriers to participate in the provision of services. The FCC should choose the spectrum to be used for 3G in a manner which will allow US usage to be harmonized with our trading partners in a manner that serves the public interest. And, finally the FCC should require that if presently allocated non-mobile spectrum is to be used for 3G purposes, that it should be re-licensed through an auction process that is open to present cellular, PCS and other mobile operators.

Respectfully submitted,

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