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Before the
Federal Communications Commission
Washington, D.C. 20554

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In the Matter of	)	
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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

To: The Commission

COMMENTS OF WIRELESS ONE OF NORTH CAROLINA, L.L.C.

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SUMMARY

Wireless One of North Carolina, L.L.C. ("WONC") opposes reallocation by the Commission of any portion of the 2150-2160/62 MHz and 2500-2690 MHz spectrum for 3G mobile services.

The 2150-2160/62 MHz and 2500-2690 MHz bands, which are currently allocated for fixed broadband wireless services, are crucial to the implementation of the digital high-speed wireless broadband services that are being developed by WONC and other wireless broadband service providers throughout the country. WONC, in cooperation with the University of North Carolina, North Carolina community colleges and North Carolina public school systems, is developing a statewide network it believes will meet the demand for digital high-speed wireless broadband services and interconnectivity in North Carolina.

In addition to serving the high profile urban areas in the state, the North Carolina Statewide System will provide digital high-speed wireless broadband services to unserved rural markets. These markets are often ignored by cable and DSL providers because of the high cost of extending wireline technologies to more sparsely populated areas. Digital high-speed broadband wireless service is not hindered by these cost issues. However, in order to provide a competitive high-speed wireless broadband service, WONC must be able to utilize all of the 2150-2160/62 MHz and 2500-2690 MHz spectrum. Reallocation of any portion of this spectrum will derail development of the North Carolina Statewide System and will deprive all the residents of North Carolina of these much needed telecommunications and interconnection services.

The Commission has identified sufficient alternative spectrum in other bands which is available now for 3G mobile services. The immediate availability of this alternative spectrum means

that it is not necessary for the Commission to reallocate any portion of the 2150-2160/62 MHz and 2500-2690 MHz spectrum bands which are essential for the development of digital high-speed wireless broadband services. Utilization of the available alternative spectrum for 3G services will permit the continued development and launch of digital high-speed wireless broadband services in the 2150-2160/62 MHz and 2500-2690 MHz bands and will ensure that operators and the public are able to offer and obtain the kinds of wireless broadband services that will be essential in the 21st century.

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COMMENTS OF WIRELESS ONE OF NORTH CAROLINA, L.L.C.

Wireless One of North Carolina, L.L.C. ("WONC"),by its attorneys, hereby files these Comments opposing reallocation by the Federal Communications Commission ("Commission") of the 2500-2690 MHz spectrum for Third Generation ("3G") mobile services. In its *Notice of Proposed Rulemaking and Order* ("NPRM"), which was released on January 5, 2001, the Commission requested comment on the possible use and reallocation of certain frequency bands below 3 GHz for new advanced wireless services, including 3G wireless systems. NPRM at ¶ 1. The 2500-2690 MHz band, which is currently allocated for fixed broadband wireless services, specifically the Multipoint Distribution Service ("MDS") and the Instructional Television Fixed Service ("ITFS"), is one of the bands being considered for reallocation by the Commission for 3G services.

The 2500-2690 MHz band should not be reallocated because the entire spectrum is crucial to the implementation of digital high-speed wireless broadband services that are being developed by WONC in North Carolina and by other operators throughout the country. There is currently enormous unmet demand for digital high-speed wireless broadband services and interconnectivity

in North Carolina, particularly in smaller cities and rural areas. WONC is developing a statewide system in North Carolina that will meet these needs and will serve both commercial and educational subscribers, thereby bridging the digital divide and promoting rural equity, as well as providing a competitor to cable modems and DSL. The full 2150-2160/62 and 2500-2690 MHz bands are essential to the implementation of the North Carolina Statewide System and no portion of these bands should be reallocated, particularly because any 3G spectrum needs can be met through alternative spectrum reallocations.

I. Background

WONC is a wireless broadband operator in North Carolina. In addition to holding licenses for certain incumbent MDS stations in Charlotte and Raleigh, North Carolina and authorizations for 11 basic trading areas ("BTA"), WONC has an alliance with dozens of educational institutions in North Carolina which hold licenses and permits for ITFS spectrum in the state. WONC plans to utilize this alliance with the University of North Carolina ("UNC"), the North Carolina community colleges and various North Carolina public school systems to develop the North Carolina Statewide System which will provide rural, suburban and urban users throughout the state with access to digital high-speed wireless broadband services and interconnectivity, and will also provide educational opportunities that will bridge the digital divide and promote rural equity.

WONC's relationship with its ITFS partners in North Carolina is unique and is the basis for WONC's plans for developing the North Carolina Statewide System. Through its relationship with UNC, community colleges and public school systems throughout the state, WONC believes the North Carolina Statewide System can blanket the state with high-speed wireless broadband services ("North Carolina Statewide System" or "NCSS").

In 1995, WONC began to lay the groundwork for the NCSS when it worked closely with its ITFS partners to prepare and file 64 ITFS applications in 11 markets in North Carolina during the Commission's October 1995 ITFS Filing Window (which was the first opportunity for filing ITFS applications after the Commission lifted its freeze). The technical proposals in these applications were developed over a year long process and were geared toward covering the state with backbone facilities that could provide telecommunication services to the widest segment of the population.

A total of 144 ITFS applications were filed for markets in North Carolina during the Commission's October 1995 ITFS Filing Window, including 66 applications prepared by UNC, and its affiliates, for 22 markets. Virtually every one of these ITFS technical proposals was mutually exclusive with another application filed during the same time period. In addition to in market mutual exclusivity, many applications were also technically mutually exclusive with applications for ITFS facilities in adjacent markets and states. The daisy chain of mutual exclusivity created by these conflicting technical proposals extended from one side of the state to the other, and affected every market. Unless resolved by the ITFS applicants and WONC, these technical conflicts would have resulted in an interminable application processing deadlock at the Commission.

Recognizing the perils of failing to resolve these technical roadblocks, WONC, UNC, the community colleges, the public school systems and other independent ITFS applicants agreed to work together to resolve the daisy chain of mutual exclusivity created by the conflicting technical proposals. WONC spearheaded this widespread cooperative effort amongst competing ITFS applicants to resolve virtually all of the mutually exclusive ITFS applications throughout the state. As a result of the complicated technical issues involved in ITFS engineering and the need to resolve these conflicts in a sequential manner, the last of the resolutions was just filed with the Commission in February 2001. Such a cooperative effort to resolve extensive electrical interference issues is

unprecedented among commercial and educational entities in any state in the country: it evidences the importance all parties have placed on developing the NCSS, which all participants believe will provide high speed wireless broadband services and interconnectivity to all facets of the North Carolina population. In addition to advanced broadband commercial services, it will allow the ITFS licensees to provide 21st century educational opportunities to the residents of North Carolina.

Since the original ITFS applications were filed in 1995, the Commission has revised its rules to permit digital two-way technology on the MDS and ITFS spectrum.[1] WONC's vision and plans for the NCSS have evolved as the Commission's rules have changed. At the first opportunity to do so, during the Commission's August 2000 Two-Way Filing Window, WONC filed applications for two-way facilities in four (4) strategically located markets around the state. These applications are the initial steps in the development of the NCSS. It is anticipated that Commission authorizations for WONC's pending two-way applications, along with Commission authorizations for those filed by other ITFS and MDS operators nationwide, will become effective in early April 2001. Construction can then begin on high speed wireless broadband facilities utilizing the ITFS / MDS spectrum. The Commission has also implemented a rolling one day filing window which will also become effective in early April 2001; after that time supplemental two-way applications can be filed as necessary to accomplish high speed wireless system buildouts.

Having spent more than five years laying the groundwork for the NCSS by: expending millions of dollars in capital and thousands of man-hours facilitating the filing and settlement of mutually exclusive ITFS applications; resolving conflicting technical proposals; conducting

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[1] The Commission established service rules for the use of the band for two-way transmissions in 1998. *See Two-Way Order*, 13 FCC Rcd 19112 (1998), recon., 14 FCC Rcd 12764 (1999), *further recon.*, FCC 00-244 (released July 21, 2000). The first Two-Way Filing Window occurred August 14-18, 2000 ("Two-Way Filing Window").

engineering studies and filing modified technical proposals and two-way applications; acquiring additional MDS spectrum; and, testing equipment, WONC is now poised to proceed with its plans for digital high-speed wireless broadband services in North Carolina. Reallocation of any portion of the 2150-2160/62 MHz or 2500-2690 MHz bands will derail development of the North Carolina Statewide System and deprive all the residents of North Carolina of these much needed telecommunications and interconnection services.

II. Configuration of The North Carolina Statewide System.

WONC is developing the North Carolina Statewide System in a cellular configuration that will provide digital high-speed wireless broadband services and interconnectivity throughout the state to business and residential subscribers as well as educational institutions, by utilizing both ITFS and MDS frequencies. The NCSS will provide high speed throughput rates and the type of advanced wireless services that the Commission is promoting in the NPRM. However, WONC's plans for the North Carolina Statewide System require that the entire 2150-2160/62 MHz and 2500-2690 MHz spectrum bands be utilized.

WONC has been testing equipment by a variety of manufacturers to determine the most suitable alternative for the North Carolina Statewide System. WONC's strategy for developing the North Carolina Statewide System focuses on certain critical requirements that it believes are essential to a viable and successful facility serving all facets of the state's population. The North Carolina Statewide System will be ubiquitous; consumer equipment will be simple to utilize; the service will be cost effective; and, the NCSS backbone equipment will be readily available. Additionally, utilization of a digital format will ensure the most effective use of the spectrum.

WONC has already engaged in initial testing using various types of backbone and customer equipment that has allowed WONC to: (1) verify system capacity issues to ensure that subscribers

and other system users will have service at all times; (2) define coverage and optimum configuration; (3) establish solid structure penetration loss values so that WONC will know how the signal is affected when the antenna is located inside a building; (4) determine actual system performance compared to engineering predictions; and, (5) determine, on a limited basis, the interaction between sectors of a cellularized system and between cells themselves. The initial test results have been positive and WONC believes it can access backbone and customer equipment in a manner that will make service cost effective to the consumer. Its engineering has demonstrated that ubiquitous services can be accomplished throughout the state. Thus, all of the criteria for launching the North Carolina Statewide System are achievable.

III. The North Carolina Statewide System Will Provide Competitive Wireless Broadband Throughout the State.

WONC believes that the North Carolina Statewide System can satisfy the unmet demand for digital high-speed wireless broadband services in the state. Specifically, WONC believes that the North Carolina Statewide System can provide competitive Internet access services to the residents, businesses and educational institutions located in the state's major urban areas, as well as in the underserved smaller cities and rural areas that have been largely ignored by wireline and cable operators. However, in order to provide such a regionally ubiquitous service at acceptable throughput rates WONC must be able to utilize all of the spectrum in the 2150-2160/62 MHz and 2500-2690 MHz bands.

The geography and demographic characteristics of North Carolina are unique. Outside of the Charlotte, Raleigh and Greensboro markets, there are only small cities and rural areas that do not have access to the resources of the larger urban areas. Further, even the residents and businesses that have broadband service have access, at most, to two providers: cable modem service provided by

the incumbent cable provider and/or DSL provided by the ILEC. The DLEC's, which promised to provide competition to other predominant wireline services, have been plagued by financial problems and have largely dropped out of the high-speed data race. See *"Cable Maintains Data Lead But Bells Are Making Strong Gains"*, Communications Daily, Vol. 24, No. 25 (February 6, 2001). Thus, the digital high-speed wireless broadband services that will be offered by the North Carolina Statewide System will provide much needed competition to current wireline providers. This will give business and residential subscribers another option for obtaining services and will also provide wireless broadband services and interconnectivity to those who are not served by either cable or DSL. Many of these unserved customers are located in remote or rural areas. Cable and DSL providers do not serve remote or rural areas because of the high cost of running wireline technologies to sparsely populated areas. Serving these areas does not make economic sense for wireline services. Unlike wireline technologies, wireless broadband services can economically serve large portions of rural areas. This will allow residents and businesses in these unserved rural areas to obtain much-needed broadband services.

In addition to commercial applications, the North Carolina Statewide System will provide educators with a unique platform for outreach to the North Carolina community. Students from UNC, the community colleges and the public school systems will have access to educational opportunities made available through the North Carolina Statewide System, including Internet connectivity and specialized video applications. The educational institutions that are part of the North Carolina Statewide System will also be able to offer enhanced educational opportunities, such as distance learning, to residents all over the state. This will open up numerous educational opportunities to an otherwise underserved segment of the population and will permit UNC and the community colleges to provide services to this segment of the population. Educators will also utilize

the North Carolina Statewide System for other applications such as the host of Tele-health services currently being implemented on wireless systems throughout the country.

The North Carolina Statewide System will be successful because it will offer cost effective commercial digital high-speed broadband wireless services to businesses and residents throughout the state, in conjunction with providing much needed educational outreach services. However, the North Carolina Statewide System can only provide all of these much needed services if the ITFS allocation remains in the present band, contiguous to the MDS channels operated by WONC. In the NPRM, the FCC discusses pairing the 2110-2150/2160-2165 MHz bands with spectrum in the 2500-2690 MHz band or pairing the 1710-1755 MHz band with spectrum in the 2500-2690 MHz band. Id. at ¶ 69. If any of the ITFS spectrum were relocated to another band under this option, it would no longer be technically compatible with the MDS channels. Both the ITFS and MDS frequencies are critical to the development of the North Carolina Statewide System and reallocation of any of the frequencies would be disastrous.

IV. There Is Sufficient Alternative Spectrum Available for 3G Mobile Services.

There is sufficient alternative spectrum available for advanced wireless services such that the Commission does not need to reallocate any portion of either the 2150-2160/62 MHz or the 2500-2690 MHz spectrum bands in order to meet the need for 3G services. A number of spectrum alternatives were outlined in the Commission's NPRM and they better serve the public interest than reallocating MDS/ITFS spectrum from current users such as WONC and its ITFS partners who have demonstrated the public demand for the high speed wireless broadband services they will offer via the MDS/ITFS spectrum.

The Commission points out that approximately 70 MHz of spectrum is already allocated for mobile and fixed services and could be used for 3G applications. NPRM at ¶ 34. This 70 MHz

consists of 40 MHz in the 1850-1910/1930-1990 MHz bands which is currently used by mobile service providers and 30 MHz in the 746-806 MHz band which was recently reallocated for fixed and mobile services and is currently scheduled for auction in September 2001.

Further, the Commission has designated the 1710-1755 MHz spectrum for reallocation and is proposing in the NPRM that this 45 MHz block be specifically allocated for fixed and mobile services. NPRM at ¶¶ 40-41. This spectrum is available for auction now and would provide 45 MHz of spectrum for 3G services quickly, certainly more quickly than such services could be provided on the 2150-2160/62 MHz and 2500-2690 MHz bands. This spectrum is also better suited for international roaming in the Americas and Canada where the 1.7 GHz band is allocated for 3G services. See FCC Staff Report Issued by the Office of Engineering and Technology, Mass Media Bureau, Wireless Telecommunications Bureau, and International Bureau: *"Spectrum Study of the 2500-2690 MHz Band: The Potential for Accommodating Third Generation Mobile Systems,"* Interim Report, ET Docket No. 00-232, DA 00-2583, released November 15, 2000.

The Commission has also proposed that the 2110-2150 MHz and 2160-2165 MHz bands, which are already allocated for mobile and fixed services, be designated for the provision of advanced mobile services and assigned through competitive bidding by September 30, 2002, with incumbent users being relocated. NPRM at ¶50-52. The 2110-2150 MHz band would provide an additional 40 MHz of spectrum that could be available for 3G services once an auction was completed. However, WONC strongly opposes reallocation of the 2160-2165 MHz band as it contains spectrum which is already incorporated into the high-speed wireless broadband plans of many operators.

The Commission asked for comment on the current and planned use of MDS channels in the 2150-2160/62 MHz band and the effect reallocation would have on such uses. NPRM at ¶ 55.

WONC strongly opposes any reallocation of this band. This segment of the MDS/ITFS band is non-adjacent to the primary allocation at 2500-2690 MHz and thus is uniquely suited for applications which require a large channel separation. Many operators, including WONC, designated this spectrum alone for upstream or "two-way" transmissions in their two-way applications which were filed with the Commission in August 2000. With Commission grant of most of these applications expected in early April 2001, operators expect to begin construction of their digital high-speed wireless broadband networks utilizing 2150-2160/62 MHz for the "two-way" component. Thus, reallocation of the 2150-2160/62 MHz band would be devastating to the imminent implementation of digital high-speed wireless broadband services in this country. Additionally, because the 2150-2160/62 MHz band was previously licensed by the Commission pursuant to a competitive bidding process, any reallocation or relocation raises complex procedural and administrative issues which need not be addressed when sufficient alternative spectrum is readily available for 3G services.

Clearly, among the spectrum bands identified by the Commission there is sufficient alternative spectrum that is readily available for the implementation of 3G services without reallocating any portion of the MDS/ITFS spectrum. Utilizing these available spectrum alternatives would enable existing narrowband mobile operators to begin launching 3G services while at the same time allowing WONC, and other digital high-speed wireless broadband providers, to serve the nation's unmet demand for digital high-speed wireless broadband services. Such a solution would best serve the public interest.

IV. Conclusion

WONC opposes reallocation of any portion of the 2150-2160/62 MHz and 2500-2690 MHz spectrum bands. As discussed herein, WONC has made a five year investment of capital, resources and research in developing the North Carolina Statewide System which requires all of the current

MDS/ITFS spectrum in order to provide high speed wireless broadband services and interconnectivity at high-speed throughput rates to the residents of North Carolina. WONC believes it can provide affordable, competitive services to residential and business subscribers and to educators and students alike utilizing the MDS/ITFS spectrum. WONC has developed a unique relationship with UNC, the community colleges and the public school systems and believes that together they can develop a ubiquitous system that will serve the commercial as well as educational needs of the state for high-speed broadband and interconnectivity alternatives.

Any reallocation of the 2150-2160/62 MHz and 2500-2690 MHz spectrum bands will be disastrous for the North Carolina Statewide System. The spectrum needs for 3G services can be met through the allocation of alternative spectrum. Thus, the public interest in obtaining both services can be met by leaving the current ITFS/MDS allocation in place for high speed wireless broadband services and allocating available alternative spectrum for 3G services. Therefore, it is neither necessary nor desirable for the Commission to reallocate either the 2150-2160/62 MHz spectrum or the 2500-2690 MHz spectrum and WONC strongly opposes such reallocation.

Respectfully submitted,

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