

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

In the Matter of)
) ET Docket No. 00-258
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)

To: The Commission

**COMMENTS OF THE
COMMUNITY TELECOMMUNICATIONS NETWORK**

The Community Telecommunications Network (hereinafter referred to as the "Detroit ITFS Group"), by its attorneys, hereby submits these comments in response to the Notice of Proposed Rule Making and Order, FCC 00-455, released by the Federal Communications Commission (the "Commission") in the above-captioned proceeding on January 5, 2001 (the "NPRM").

I. INTEREST OF THE DETROIT ITFS GROUP

The Detroit ITFS Group is a nonprofit corporation founded in 1989 by the Instructional Television Fixed Service ("ITFS") licensees in the Detroit, Michigan area.¹ The Detroit ITFS Group was created to coordinate activities of these licensees, including the construction, operation, and maintenance of collocated transmission and production

¹ The Detroit ITFS Group's members (and their call signs) are as follows: Detroit Educational Television Foundation (WHR915); Detroit Public Schools (KTB98); Macomb Intermediate School District (WHR914); Oakland Schools (WHR508); Wayne County Regional Educational Service Agency (WHR916); and Wayne State University (WAK57).

facilities. In addition, the Detroit ITFS Group acts as the interface point between these licensees and the Detroit area Multichannel Multipoint Distribution Service (“MMDS”) operator; the Detroit ITFS Group leases excess capacity from its individual members and subleases capacity to the MMDS operator.

Unlike the various ITFS systems established during the 1990s primarily (if not exclusively) through the largess of a local MMDS operator, members of the Detroit ITFS Group operated extensive ITFS systems well before the Commission’s 1983 effort to make new channel capacity available for the MMDS industry.² (For example, Wayne State University has been licensed to operate its ITFS system since the late 1960s.) Indeed, even the most recently established systems that operate under the Detroit ITFS Group umbrella were licensed at least five years prior to the establishment of a relationship with an MMDS operator.

It is from this perspective, arising from the long and extensive operating history of its members, including their continuing efforts to increase access to educational programming, that the Detroit ITFS Group has examined the Commission’s proposals to allocate portions of the 2500 - 2690 MHz band for third generation (“3G”) wireless services.³ By commenting on these proposals, the Detroit ITFS Group seeks to ensure that ITFS spectrum is not re-allocated for other services, and therefore remains available

² “Amendment of Parts 2, 21, 74 and 94 of the Commission’s Rules and Regulations in Regard to Frequency Allocation to the Instructional Television Fixed Service, the Multipoint Distribution Service, and the Private Operational Fixed Microwave Service,” 94 FCC.2d 1203 (1983) (reallocating the E and F groups and permitting the leasing of excess ITFS channel capacity to MMDS).

³ See NPRM at ¶¶ 58-65.

to facilitate the continuing and growing development of critical, next-generation educational access services.

II. ITFS IS ESSENTIAL FOR ENSURING EDUCATIONAL ACCESS TO VIDEO AND ADVANCED SERVICES.

The Commission’s regulatory framework for ITFS historically has promoted the availability of substantial and meaningful educational opportunities that would not otherwise be available to students and teachers. The overall impact of these educational opportunities should not be underestimated. Well over 70,000 locations throughout the United States are served by ITFS licensees, which hold a combined total of more than 2,175 licenses.⁴ As the Commission has observed, ITFS has become an essential part of the curriculum of many educators.⁵

In the Detroit area, the Detroit ITFS Group’s members annually provide thousands of hours of educational programming services to an educational community of approximately 500,000 individuals (including, for example, students, educators, and professionals seeking continuing education courses), located at schools (K-12, community colleges, and universities), community centers, libraries, hospitals, and individual homes. These services include formal classroom instruction, as well as other educationally valuable programming.

The breadth and depth of the educational opportunities made available through ITFS in the Detroit area and other parts of the United States is about to increase

⁴ See “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 (“FCC Interim Report”), at 18.

⁵ Id. at 19.

exponentially, as the Detroit ITFS Group's members and other ITFS licensees now stand ready to deploy a new generation of educational access services. Through a series of decisions, including the Digital Declaratory Ruling⁶ and the Two-Way Order⁷, the Commission has paved the way for ITFS licensees to dramatically expand the range of services that they can provide, and thereby more fully realize the potential of ITFS.⁸ These decisions allow ITFS licensees to upgrade their systems to provide advanced services, such as broadband Internet access, that will play a critical role in providing students and teachers with new educational opportunities.

Broadband capability is necessary for ITFS operators to move beyond mere television and to provide advanced services, including video-on-demand, video conferencing, and interactive multimedia applications. Broadband Internet access is becoming essential. Yet, many homes, businesses, and schools do not, and will not, have such access because broadband is not available, and will not be available, via cable or telephone (e.g., Digital Subscriber Line), in many geographic areas. Thus, providing broadband Internet access via ITFS, in partnership with MMDS, is the only solution to fill-in the gaps to ensure that affordable broadband Internet access is available throughout the United States.

⁶ "Request for Declaratory Ruling on the Use of Digital Modulation by Multipoint Distribution Service and Instructional Television Fixed Service Stations," Declaratory Ruling and Order, 11 FCC Rcd 18839 (1996) ("Digital Declaratory Ruling").

⁷ "Two-Way Order," 13 FCC Rcd 19112 (1998), recon., 14 FCC Rcd 12764 (1999), further recon., FCC 00-244 (released July 21, 2000) ("Two-Way Order").

⁸ See also "The Mass Media Bureau Implements Policy for Provision of Internet Service on MDS and Leased ITFS Frequencies," 11 FCC Rcd 22419 (1996).

Enormous amounts of time, money (including state and local educational tax dollars), and effort have been invested by the educational community in developing these ITFS systems, preparing to modify them to provide next-generation distance-learning services, and in developing educational programming which cannot be delivered without broadband access. There simply is no public interest rationale that would support undermining these important efforts.

The overwhelming implication of this track record of success and plans for future deployment is obvious. In evaluating the merits of allocating ITFS spectrum for 3G services, the Commission should carefully consider that ITFS, unlike 3G services, provides -- and will continue to provide -- substantial and meaningful educational opportunities to students and teachers.

III. ALLOCATING ITFS SPECTRUM FOR 3G SERVICES WOULD UNDERMINE THE ABILITY OF BOTH ITFS AND MMDS SYSTEMS TO PROVIDE ADVANCED SERVICES.

Critical to the overall success of both ITFS and MMDS operators' plans to deploy broadband systems is their ability to: (1) aggregate sufficient bandwidth to support true broadband services; and (2) reconfigure the various ITFS/MMDS channel groups for upstream and downstream transmissions, with adequate band separation to prevent both intra-system and inter-system interference. The Commission recognized this fact when it modified its regulations to facilitate such rechannelization plans.⁹

The Detroit ITFS Group, working with the local MMDS licensee, has invested considerable resources in developing a channelization plan that will enable its

⁹ See 47 C.F.R. §§ 74.990, 74.991, 74.992; "Amendment of Parts 21, 43, 74, 78, and 94 of the Commission's Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands," 6 FCC Rcd 6792, 6801-806 (1991).

members to carry out their educational mission and the MMDS operator to pursue its business plan; the requisite applications are scheduled to be submitted in the next filing "window" opened by the Commission.¹⁰ The Commission's proposals to allocate a portion of the 2500 - 2690 MHz band for 3G services would jeopardize this entire undertaking. Neither adequate bandwidth, nor the flexibility to properly configure the various channels, will be available to either the ITFS or MMDS licensees to enable them to achieve their goals if the Commission allocates any portion of the 2500 - 2690 MHz band for 3G services.

IV. ITFS USERS CANNOT BE MOVED TO DIFFERENT BANDS.

As the Commission is well aware, it would be very difficult to alter the carefully crafted spectrum allocation scheme for ITFS and MMDS because channel usage varies greatly between geographic areas.¹¹ Nonetheless, the Commission has suggested that it might be possible to relocate ITFS and MMDS channels to different bands.¹² Given the substantial spectrum constraints below 2500 MHz, relocating channels necessarily would involve relocating channels to higher frequencies.¹³

Operation of ITFS systems at higher frequencies would create significant technical problems for ITFS licensees, due to the increasing importance of unobstructed line-of-site operations and atmospheric attenuation effects at higher frequencies. In

¹⁰ Because of its topography, the Detroit area presents a complex mix of trees and hills that must be considered in a channel plan.

¹¹ See NPRM at ¶ 61.

¹² Id. at ¶ 62.

¹³ Even spectrum a higher frequencies may be unavailable.

geographic areas that have significant amounts of trees and topographical variation, or substantially above average amounts of rainfall, operation of ITFS systems at higher frequencies is not feasible at any cost. This is the case in the Detroit area.

Furthermore, any relocation of existing ITFS operations necessarily would require ITFS licensees to divert a significant portion of their limited financial and human resources from deployment of advanced educational access services toward modifying their facilities to comply with the new allocation. ITFS licensees should not be required to subsidize the deployment of 3G services in this way.

V. CO-CHANNEL SHARING AND BAND SEGMENTATION ARE NOT FEASIBLE.

The Commission also requested comment on proposals involving co-channel sharing and band segmentation.¹⁴ These options simply are not feasible and would undermine the deployment of next generation ITFS systems.

Co-channel sharing and band segmentation options were thoroughly analyzed by the Commission's staff in the FCC Interim Report, which correctly concluded that those options are not feasible because of how ITFS and MMDS systems are implemented today and planned to be implemented in the future.¹⁵ The staff's analysis shows that large co-channel separation distances would be needed between 3G systems and ITFS systems to avoid harmful interference effects.¹⁶ By allowing 3G systems to operate on the same channels as ITFS, the Commission would be introducing

¹⁴ NPRM at ¶¶ 63-65.

¹⁵ FCC Interim Report at 39-62.

¹⁶ Id. at 42.

a major complexity into the already complex arrangements that must be made to coordinate ITFS and MMDS operations. Furthermore, co-channel sharing would reduce the flexibility created by the Commission's rules permitting channel swapping by turning channels subject to sharing into universally disfavored parts of the spectrum.

Band segmentation also is not feasible because it would increase the complexity of coordination due to the potential for adjacent channel interference effects, which already are a significant concern for ITFS licensees. Furthermore, all of the segmentation options identified in the FCC Interim Report would necessitate the widespread relocation of a large number of stations which, as discussed above, is not feasible due to the lack of suitable spectrum.¹⁷

¹⁷ Id. at 60.

CONCLUSION

In evaluating the Commission's proposals to allocate a portion of the 2500 - 2690 MHz band for 3G services, the Detroit ITFS Group has carefully considered the potential impact of each proposal on the ability of the Detroit ITFS Group's members to carry out their educational mission. The Detroit ITFS Group is convinced that the Commission's various proposals for this band would have catastrophic effects on the ability of the Detroit ITFS Group's members to provide critical educational opportunities to students and teachers. The Detroit ITFS Group urges the Commission not to allocate any portion of the 2500 - 2690 MHz band for 3G services, and instead to focus on developing proposals involving other parts of the spectrum which the Commission already has recognized could be allocated for 3G services.

Respectfully submitted,

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