

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

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In the Matter of)
)
Redesignation of the 17.7-19.7 GHz) IB Docket No. 98-172
Frequency Band, Blanket Licensing of) RM-9005
Satellite Earth Stations in the 17.7-20.2) RM-9118
GHz and 27.5-30.0 GHz Frequency)
Bands, and the Allocation of Additional)
Spectrum in the 17.3-17.8 GHz and)
24.75-25.25 GHz Frequency Bands for)
Broadcast Satellite-service Use)

COMMENTS OF GTE

GTE Service Corporation and its affiliated domestic telecommunications and wireless cable companies¹ (collectively, "GTE") respectfully submits its Comments in response to the Federal Communications Commission's ("FCC" or "Commission") *Notice of Proposed Rulemaking*, FCC 98-235 ("*Notice*") regarding the redesignation of the 17.7 - 19.7 GHz band among various allocated services.

In the *Notice*, the Commission seeks comment on its proposal to separate terrestrial fixed services ("FS") operations from the operations of non-government

¹ These comments are filed on behalf of GTE's affiliated domestic telephone operating companies, GTE Wireless Incorporated, GTE Communications Corporation and GTE Media Ventures, Inc. GTE's domestic telephone operating companies are: GTE Alaska Incorporated, GTE Arkansas Incorporated, GTE California Incorporated, GTE Florida Incorporated, GTE Hawaiian Telephone Company Incorporated, The Micronesian Telecommunications Corporation, GTE Midwest Incorporated, GTE North Incorporated, GTE Northwest Incorporated, GTE South Incorporated, GTE Southwest Incorporated, Contel of Minnesota, Inc. and Contel of the South, Inc.

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ubiquitously deployed Ka-Band Fixed Satellite Service ("FSS") into dedicated sub-bands.² The Commission proposes to provide primary designations for: (1) FS use in the 17.7 - 18.3 GHz band; (2) Geostationary Orbit Fixed Satellite Service ("GSO/FSS") use in the 18.3 - 18.55 GHz band; and, (3) Non-Geostationary Orbit Fixed Satellite Service ("NGSO/FSS") use in the 18.8 - 19.3 GHz band.³ In addition, the Commission proposes co-primary designations for FS and GSO/FSS in the 18.55 - 18.8 GHz band and FS and Mobile Satellite Service Feeder Link ("MSS/FL") in the 19.3 - 19.7 GHz band. The Commission also proposes a blanket licensing procedure that would allow Ka-band FSS satellite earth stations to operate under a single system license in bands that are designated for their primary use.⁴

GTE holds controlling interests in a number of FS licenses that are critical to its provision of local exchange services (both incumbent and competitive), wireless, long distance, wireless cable and data transmission services. GTE believes the Commission's proposed redesignation of the 17.7 - 19.7 GHz band among the various allocated services will not result in the highest and best use of this scarce resource, will prove to be unworkable, and is not in the public interest. As an alternative to the Commission's proposed redesignation, GTE supports the allocation plan advanced by the Telecommunications Industry Association ("TIA").

² *Notice* at ¶ 1.

³ *Notice* at ¶ 2.

⁴ *Notice* at ¶ 3.

I. DISCUSSION

In September 1997, the Commission issued a public notice to refresh the record on whether frequency sharing could be achieved between Fixed Services and Satellite Service Stations in the 17.7 – 19.7 GHz band, and whether blanket licensing procedures are appropriate for the 17.7 - 20.2 GHz and bands. In its Comments, GTE opposed blanket licensing of FSS satellite downlink stations, supported measures to protect FSS earth stations from interference, and stated that technical and operational rules must be developed prior to the implementation of interservice sharing.

Based upon the record, the Commission recognized the difficulties involved with sharing the 17.7 - 19.7 GHz band.⁵ The Commission tentatively concluded that the public interest is best served by redesigning the 17.7 - 19.7 GHz band to separate terrestrial fixed services from most satellite earth station operations.⁶ In this proposal, the Commission designates a mere 600 MHz (17.7 – 18.3 GHz) for terrestrial fixed service. The remaining 1400 MHz (18.3 – 19.7 GHz) is designated for primarily satellite use. The Commission proposes to grandfather existing terrestrial fixed users in bands that are designated for satellite services.

⁵ *Notice* at ¶ 18.

⁶ *Notice* at ¶ 19.

A. GTE Relies on 18 GHz Licenses for the Provision of Critical Telecommunications Services.

The 18 GHz band and its service capacity are extremely important to GTE and its customers.⁷ Besides being used for growing daily communication in our Local Exchange Areas and Wireless Networks, the 18 GHz band is an integral part of GTE's emergency service restoration plans. Recent events have once again demonstrated the need for the type of quick and reliable network connections that the 18 GHz band provides.⁸

The 18 GHz equipment also provides cost effective service when used in the FS context.⁹ Because of its economical cost and the efficient use of spectrum, the 18GHz band is an important tool in meeting the demands of service and competition in all telecommunications sectors. If GTE is forced to use other alternatives, the costs of

⁷ Over the past two years GTE's licensed 18 GHz paths have grown between 12 – 18%.

⁸ For example, in September 1992, Hurricane Iniki struck Kauai, Hawaii. GTE used three 18 GHz routes to restore service to isolated towns on the Island of Kauai. In 1993, the Midwest was hit with massive floods. GTE used the 18 GHz band to restore long distance and local service to areas in central Missouri isolated by record Missouri River flooding. The use of the 18 GHz band in emergency restoration plans continues today. In September 1998, Hurricane Georges struck Daulphin Island, Alabama. Once again, GTE used 18 GHz facilities in its restoration plan for providing service to its Daulphin Island exchange.

⁹ When comparing current list prices for 18 GHz equipment with equivalent 6 and 11 GHz equipment you will find that radios with a DS3 capacity average 25% less, antenna prices are 30+% less and connecting waveguide or cable facilities are half the price of 6 and 11 GHz cable. 18 GHz antenna supporting structures are also considerably more cost effective.

providing service undoubtably will increase and it will be more difficult for GTE to meet the demands of competition and customer growth.

While GTE agrees with the Commission that spectrum should be made available for emerging satellite services, the Commission's current FS frequency proposal is workable. The Commission's proposal would reduce FS current spectrum allocation by 53%. Of the remaining 47%, FS would be required to share the spectrum with FS point-to-point one-way Video distribution services. The Commission is well aware of the difficulty in sharing these frequencies: "Due to the difficulties of coordinating these point-to-point multipoint operations with typical point-to-point terrestrial fixed service operations, these services have generally been licensed in separate portions of the band."¹⁰ Thus, the proposed allocation will cause both FS point-to-point and FS point-to-point one-way Video distribution services to lose critical 18 GHz capacity.

B. FCC Rules and Policies Should Promote Efficient Spectrum Use.

As discussed in its Comments in RM-9005, GTE is concerned that frequencies are being licensed to FSS providers without the licensee demonstrating an immediate or near term need. The Commission must promote the principle of efficient spectrum use. If a service provider requires additional FS licenses, it should be required to demonstrate that it needs the spectrum and that granting the license serves the public interest, convenience and necessity.¹¹

¹⁰ *Notice* at ¶ 27.

¹¹ *See* 47 C.F.R. § 101.701(a).

GTE believes that initially the Commission should authorize each qualified FSS service provider only that portion of the spectrum designated for FSS use that can be supported by near-term demand for the service. As FSS services grow and demand increases, additional spectrum blocks can be licensed. GTE also believes that FSS providers should be required to conserve the spectrum they are licensed to use. GTE notes that fixed microwave licensees are required to have a minimum transmitter efficiency of 1 bps/Hz.¹² The FS industry has also developed through the National Spectrum Manager Association ("NSMA") and the TIA prior coordination methodologies for managing FS spectrum utilization, eliminating potential RF interference and maximizing frequency re-use. GTE believes the FCC should require FSS licensees to abide by the reasonable efficiency standards.

C. The Commission's proposal for "Grandfathered FS" will not work.

In an effort to recognize the "investments" made by existing FS users, the Commission has proposed to grandfather existing "terrestrial fixed service operations that have been either licensed or for which applications are pending, as of the release date of this NPRM, for any band that is proposed to be designated for fixed satellite service use on a primary basis."¹³ As first-hand experience in the 4 GHz band has shown, there is no practical way FS systems can share spectrum with satellite systems

¹² See 47 C.F.R. § 101.701(a)(1).

¹³ Notice at ¶ 40.

on a co-primary basis.¹⁴ Even if grandfathered FS licensees were able to avoid harmful interference from satellite operation, the limitations the FCC proposes to impose on grandfathered FS licensees (*i.e.*, not being allowed to expand or change their current operations in any manner that might increase interference to satellite earth stations) place costly and unnecessary burdens on the FS licensees. Grandfathered licensees must have the ability to expand their networks to meet normal growth in a cost effective manner and to realize the maximum efficiency of their existing radio equipment. GTE urges the Commission to carefully examine actual engineering data on interservice spectrum sharing – not unsupported theories -- before adopting any rules that assume spectrum sharing as a critical component of the overall spectrum plan.

D. GTE Supports the TIA's Proposed Plan of Spectrum Allocation

GTE supports the TIA's modified version of the Commission's proposed band segmentation plan, which has been proposed in this proceeding. The Fixed Point-to-Point Section, Wireless Communications Division of the TIA, developed this Plan. This plan takes in consideration the minimum requirements of the FS community as well as spectrum needs for GSO/FSS, NGSO/FSS and MSS/FL proposed systems.

The features of the TIA plan are:

¹⁴ For example, in the Dallas/Fort Worth area there are well over 200 registered earth stations in the 4 GHz band. In addition, there are many more unregistered earth stations at unknown locations throughout the metroplex. The exclusion zones that result from this large number of earth stations effectively prevents any new 4 GHz FS licenses in this major metropolitan market.

1. Preserving the existing 17.7-18.14 and 19.26-19.76 GHz paired FS primary allocations.
2. Preserving the existing 18.14-18.58 Hz primary CARS allocation (Note – this band is the only one available to the non-franchised video distribution industry Private Cable Operators (“PCOs”), which provide local competition to the wired CATV industry).
3. Grandfather incumbent licensees as primary in the paired 18.58-18.82 and 18.92-19.16 GHz FS allocation.
4. Allocate the 18.58-18.8 GHz band as primary for GSO/FSS gateways and ubiquitous blanket licensed satellite receivers.
5. Allocate the 18.8-19.26 GHz band as primary for NGSO/FSS ubiquitous blanket licensed receivers.
6. Rechannelize the 17.7-18.14 and 19.26-19.7 GHz paired FS primary allocation.

As stated in its Comments in RM-9005, GTE recommended that technical and operating criteria must be coordinated between the respective services. GTE believes the TIA proposal meets this requirement. GTE urges the Commission to adopt the TIA proposed spectrum allocation instead of the proposals in the *Notice*.

II. CONCLUSION

The Commission's proposed frequency allocation is not in the public interest. GTE urges the Commission to fully consider the plan as presented by the TIA.

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Respectfully submitted,

GTE Service Corporation and its affiliated
domestic telecommunications and wireless
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