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Federal Communications Commission  
Washington, D.C. 20554

January 13, 1995

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

The Honorable Phil Gramm  
United States Senate  
2323 Bryan Street  
Dallas, Texas 75201

Dear Senator Gramm:

This letter responds to your correspondence concerning the Commission's Notice of Proposed Rulemaking (Notice) in RR Docket No. 93-61, to develop regulations for Automatic Vehicle Monitoring (AVM) systems operating in the 902-928 MHz band. In your letter you enclose correspondence from James J. Griffin, Executive Director of the Texas Turnpike Authority. Mr. Griffin urges that the interests of toll tag systems receive careful consideration as the Commission moves this matter to resolution. Senator Hutchison and Congressman Johnson also forwarded Mr. Griffin's letter to us.

As you know, the Commission has the responsibility for ensuring spectrum use that best serves the public interest. This often requires striking a balance among competing uses. The Commission must not only evaluate tangible effects, but also the potential benefit particular uses present. Determining the most beneficial use demands merging technical, economic and legal disciplines and is as difficult as it is complex. Parties participating in the proceeding have represented wide and varied views, including wide-area AVM service providers, local-area AVM providers such as toll tag readers, manufacturers and users of Part 15 equipment, and Amateur operators. The review of the 902-928 MHz band reflects the Commission's endeavor not simply to accept the status quo, but to implement a structure that best meets the public interest.

The shared use of 902-928 Mhz frequency band by various groups makes this challenge even more difficult. The present priorities for access to this band that have been established among these groups is an important starting point. Users with lower priority generally must accept interference from and may not cause interference to users that have a higher priority. Specifically, the 902-928 MHz band is primarily allocated for use by the federal government for Radiolocation, Fixed and Mobile services, yet the federal government users must accept interference from Industrial, Scientific and Medical (ISM) devices. Following the federal government and ISM devices on the priority scale are AVM systems. Next are Amateur radio operators and then the Part 15 users that are eligible to operate in this band. As the lowest priority, Part 15 users are not permitted to cause interference to any of the other users.

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List A B C D E

The Honorable Phil Gramm  
Page Two

In the Part 15 area, the Commission is aware of the significant development in unlicensed devices. As you note, the range of new radio products serving the public and business and demonstrates significant investment and productivity gains. Part 15 products operate in numerous frequency bands throughout the radio spectrum. In the 902-928 MHz band alone, the Commission has authorized more than 20 different types of products for operation in this spectrum to more than 130 manufacturers. The Commission receives about 20 applications a month for approval of products in this part of the spectrum.

With regard to AVM, the current interim rules governing operations of AVM systems have been in place for 20 years. The Commission's record reflects that AVM systems have become the focus of increased investment opportunities. There is significant promise for enhancing public safety and convenience through its ability to track vehicles, collect tolls, determine traffic patterns and congestion, and reroute traffic. Mr. Griffin articulates well the importance this technology to not only Texas, but to state and local governments throughout the country. Moreover, AVM holds substantial promise of enhancing the efficiency and effectiveness for private sector transportation activities. Overall, advocates assert that beyond the substantial economic and safety benefits that will accrue, AVM will reduce commuter travel time and highway congestion, as well as decrease energy consumption and pollution.

One of the fundamental issues that must be confronted by the Commission is the level of interference that can be tolerated among and between the various users of this spectrum. Several parties argue that some of the planned AVM systems, primarily those that would be used to track vehicles with multilateration technology, rely on weak signals that are easily interfered with. The source of the interference is generally perceived to emanate from Part 15 devices as well as other AVM systems. Advocates on behalf of Part 15 devices express similar concerns regarding interference but more significantly regarding Part 15 devices' non-interference requirements and the continued viability to operate in the 902-928 MHz band. As you can understand, the advocacy on behalf of any one party tends to urge the primacy of that party's own interests, exclusive of others.

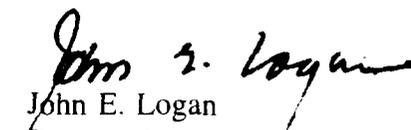
In this proceeding, the issues that must be resolved essentially revolve around whether accommodation is possible. Beyond comprehending the legitimate expectations of consumers and manufacturers of Part 15 devices as well as recognizing the potential of AVM, is the need to adopt permanent rules regarding this band. The ability to expand the use of the band while at the same time determining the degree to which different users can coexist requires

The Honorable Phil Gramm  
Page Three

insight into technological limitations as well as the economic costs at stake. The proficiency of the parties themselves to resolve interference is a significant element. In weighing the various options and issues, ranging from the degree of spectrum sharing to the means of assigning licenses, the Commission is sincerely committed to a structure that will best enhance competition and choice.

As the Commission seeks to move this matter to resolution, we appreciate very much receiving your letter. Please be assured that Mr. Griffin's views are being given careful consideration and are important to the Commission's evaluation. Please call upon us if we can provide any additional information.

Sincerely,

  
John E. Logan  
Deputy Director  
Office of Legislative and  
Intergovernmental Affairs

Phil Gramm  
Texas

United States Senate

OLA  
PR-ANM

MEMORANDUM

6413

Date: 12-27-94

Federal Communications Commission  
Office of Congressional Affairs  
1919 M Street, N.W.  
Washington, D.C. 20554

My constituent has sent me the enclosed communication, and I would appreciate a response which addresses his/her concerns.

Please send your response, together with the constituent's correspondence, to the following address:

Office of Senator Phil Gramm  
2323 Bryan Street, #1500  
Dallas, Texas 75201

Attention: Clarissa Clarke





3015 Raleigh Street • P.O. Box 190369  
Dallas, Texas 75219  
Phone 214/522-6200  
Fax 214/528-4826

December 14, 1994

The Honorable Phil Gramm  
United States Senate  
2323 Bryan, Suite 1500  
Dallas, Texas 75201

Dear Senator Gramm:

The Texas Turnpike Authority (the "TTA"), an agency of the State of Texas, invites the prestige and assistance of your office to join in an effort with the TTA to represent and protect the interest of the citizens of Texas in an action pending before the Federal Communications Commission (the "FCC").

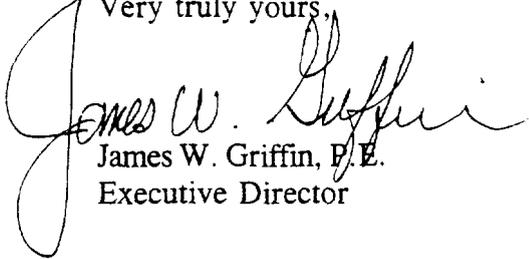
The TTA automatic vehicle identification system (commonly known as toll tags) in use on the Dallas North Tollway (the "DNT") has enjoyed wide public subscription and support as a tool for improving the efficiency of the collection of tolls and the operation of the DNT, thereby saving the patrons' time, inconvenience, and exposure to the elements as well as increasing travel safety and benefiting the environment through reduction of air pollution and noise. Currently, there are approximately 80,000 Texas subscribers to the DNT toll tag system; the TTA expects that number to increase dramatically over the next several years.

The toll tag system operates by means of radio frequencies controlled and granted by the FCC. Currently pending before the FCC is PR Docket 93-61, a matter in which the FCC will vote on spectrum availability for use in automatic vehicle monitoring ("AVM"). The AVM Systems operate within the broad frequency range of 902-928 MHz. The FCC is seriously considering narrowing the available range of frequencies within this broader band and auctioning frequencies that it does not reserve for public agency use in AVM.

The current system TTA is operating and improvements anticipated for that system require that 14 contiguous MHz be reserved for effective operation. It is our understanding that the FCC currently is considering reserving only ten (10) contiguous MHz of spectrum for use in this application; 10 contiguous channels are inadequate for the current and planned use of the DNT AVM technology.

The TTA is seeking your assistance by your contacting Chairman Reed Hundt of the FCC. It is urgent for the TTA and your constituents who subscribe to the toll tag systems in this state, including those citizens who subscribe to a similar AVM System utilized by the Harris County Toll Road Authority, that the FCC grant 14 contiguous MHz of spectrum to AVM use by the TTA. We believe FCC action on this matter is imminent; therefore, your early contact with the FCC is of vital importance to the TTA and to those constituents that may be subscribers to the TTA toll tag system. Our contact in the FCC has been Ms. Ruth Milkman, Senior Legal Advisor, phone 202-418-1000, fax 202-418-2801. Your assistance will be greatly appreciated by the staff and directors of the TTA as well as patrons of the toll tag system.

Very truly yours,



James W. Griffin, P.E.  
Executive Director

tr

Phil Gramm  
Texas

United States Senate

OLA  
PY-AUM  
6338

MEMORANDUM

Date: 12-19-94

Federal Communications Commission  
Office of Congressional Affairs  
1919 M Street, N.W.  
Washington, D.C. 20554

My constituent has sent me the enclosed communication, and I would appreciate a response which addresses his/her concerns.

Please send your response, together with the constituent's correspondence, to the following address:

Office of Senator Phil Gramm  
2323 Bryan Street, #1500  
Dallas, Texas 75201

Attention: Clarissa Clarke





3015 Raleigh Street • P.O. Box 190369  
 Dallas, Texas 75219  
 Phone 214/522-6200  
 Fax 214/528-4826

December 16, 1994

Mr. William F. Caton  
 Acting Secretary  
 Federal Communications Commission  
 1919 M Street, N.W., Room 222  
 Washington, D.C. 20006  
 STOP CODE: 1170

Re: Ex Parte Communication in PR Docket No. 93-61  
 Automatic Vehicle Monitoring (AVM)

Dear Mr. Caton:

This is to notify you that I spoke by telephone with Ms. Ruth Milkman, Senior Legal Advisor to Chairman Hundt, on December 14 concerning this proceeding. As a major user of the tag type of AVM technology, I emphasized to Ms. Milkman the need for licensees of this type of AVM to continue to have access to at least 14 MHz of contiguous spectrum in the 902 - 928 MHz band. Even this would be less than the 16 MHz to which we currently share access. Currently, we utilize a read-only technology. As such we operate facilities in both the 904 - 912 and 918 - 926 MHz sub-bands. In order to make future improvements to operate the new generation of read-write tags, we will continue to need access to at least two six MHz channels and 14 MHz contiguous. This bandwidth will make it possible for us not only to have some flexibility in resolving interference by shifting the center of the channel so as to work with other users of the spectrum but also will facilitate use of portable readers by public safety personnel.

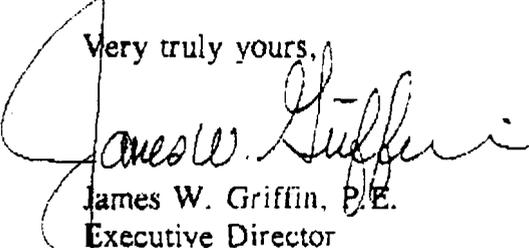
Yesterday, I spoke with Mr. Ron Netro of the Wireless Telecommunications Bureau of the Commission and covered the same points with him.

As one of the nation's first users of tag technology in an AVM application, the Texas Turnpike Authority urges the Commission to continue to make spectrum available in the 902- 928 MHz band for such systems. The Texas Turnpike Authority today has approximately 80,000 toll tags in use. Such users as well, as this state agency, who daily depend on this would be ill-served

and the substantial public investment made for such systems would be wasted by a failure to continue to provide suitable spectrum for this very efficient means of managing toll transactions. In metropolitan areas, the toll tag system acceptance and use by the public has had an extraordinarily positive impact on area social wellbeing by materially reducing traffic congestion and its attendant air pollution.

Your assistance in ensuring that the United States tolls industry is protected from regulatory action eroding its ability to utilize available sophisticated electronic technology to benefit the public will be widely appreciated; reservation of a minimum of 14 of contiguous MHz is vital to this public service.

Very truly yours,



James W. Griffin, P.E.  
Executive Director

tr

cc: Ms. Ruth Milkman  
Mr. Ron Netro

bc: Clarissa Clark

URGENT -- December 13, 1994

**FCC VOTE ON SPECTRUM AVAILABILITY**  
PR DOCKET 93-61

**ACTION NEEDED:** Contact Reed Hundt, Chairman of the FCC, to insist that the FCC make adequate radio frequency spectrum available to public agencies like the Texas Turnpike Authority (TTA) and other similar users of the 902-928 MHz band for intelligent vehicle highway systems.

**ISSUE:** The FCC is about to vote on PR Docket 93-61, dealing with Automatic Vehicle Monitoring (AVM). This vote will determine how much radio frequency spectrum will be available for users of the new state-of-the-art intelligent vehicle highway systems, like that installed by the Texas Turnpike Authority. The band plan proposed by the FCC does not provide sufficient spectrum for users of intelligent vehicle highway systems. If adopted as written, the FCC plan will negatively impact the ability of the Texas Turnpike Authority and other public agencies to obtain the licenses necessary to operate these state-of-the-art systems, and it will limit their ability to expand and improve their systems in the future. It is critical that this plan be improved to provide additional spectrum for such users before adoption.

**BACKGROUND:** TTA has invested in a state-of-the-art system, providing for non-stop toll collection for the Dallas North Tollway and is fostering new operational efficiencies and economies in Texas. TTA has obtained the appropriate radio frequency licenses, in the 902-928 MHz area of the frequency band, to operate its system. Continued licensing for this system is of great importance to the citizens of Texas.

The 902 - 928 MHz frequency band has long been shared by its users--i.e., areas of the spectrum have not been set aside for the exclusive use of one user. Like TTA, many of the current users in this band are public agencies, whose main concern is the public interest. These public interests seem not to be receiving adequate attention or priority in the current FCC proceedings.

Unfortunately, it now appears that some large companies with deep pockets have convinced the FCC to reduce the amount of spectrum available to such AVM users and auction off the rest to them for use on an *exclusive* basis, departing from the tradition of sharing in this band.

The spectrum left after the auctions for TTA and other original users of the band--who remain willing to *share* spectrum-- is insufficient to support continued growth in intelligent highway vehicle highway systems. Currently, AVM users have a total of 16 MHz of spectrum available to them. The plan now being circulated for a vote at the FCC reduces spectrum effectively available to AVM users to only 10 contiguous MHz of spectrum. Technology and the laws of physics require at least 12-14 contiguous MHz of spectrum.

The issue is being considered "under circulation" -- i.e., the FCC vote can occur at any time. It is therefore urgent that Chairman Hundt get a high-level message right away to stress the need to improve the plan before adoption.

**TALKING POINTS on FCC PR DOCKET NO. 93-61**

- Texas has invested in a state-of-the-art new system for electronic toll collection. We do not want to see the benefits of this investment limited by changes in frequency rules which favor big players with deep pockets over public agencies. (PR Docket 93-61).
- The FCC shouldn't pull the rug out from under TTA and other public agencies. The current plan unacceptably reduces total amount of spectrum available for "local area AVM (Automatic Vehicle Monitoring) users.
- Chairman Hundt should reconsider what the FCC is doing and amend the plan before adoption.
- The FCC needs to improve the current plan to find sufficient spectrum for the requirements of the Texas Turnpike Authority and other similar public agencies. A total of 12-14 MHz (two 6-MHz channels, preferably contiguous) of radio spectrum are needed.
- I understand the matter is urgent and that a vote will be taken by circulation in the very near future.

December 13, 1994

**CONTACTS**

Reed Hundt

Phone: 202 - 418-1000

Key staff persons: Ruth Milkman- Sr. Legal advisor OR Blair Levin -- Chief of Staff

Fax: 202 - 418-2801

**TEXAS  
TURNPIKE  
AUTHORITY**



3015 Raleigh Street • P.O. Box 190369  
Dallas, Texas 75219  
Phone 214/522-6200  
Fax 214/528-4826

March 7, 1994

Federal Communication Commission  
Private Radio Bureau, Land Mobile Branch  
1270 Fairfield Road  
Gettysburg, Pennsylvania 17325-7245

*Automatic  
Vehicle  
Monitoring*

Gentlemen:

The Texas Turnpike Authority herewith requests a timely waiver of Section 90.239(c) of the Commission's Rules<sup>1</sup> in order to operate automatic vehicle monitoring ("AVM") transmitters on a non-developmental basis on frequencies in the 902-928 MHz band that are not normally available for AVM operations. Specifically, the Texas Turnpike Authority is seeking to use frequencies outside of the 904-912 MHz and 918-926 MHz sub-bands for non-governmental, non-developmental AVM use.<sup>2</sup> Grant of this request and the associated applications would serve the public interest by allowing the Texas Turnpike Authority to significantly increase the efficiency of its toll revenue collection functions.

**BACKGROUND:** The Texas Turnpike Authority is a governmental agency with the responsibility of maintaining and operating the Dallas North Tollway.<sup>3</sup> In order to improve the efficiency of its collection of toll revenue and to help facilitate smooth traffic flow, the Texas Turnpike Authority plans to construct and operate an AVM system designed for electronic toll collection and traffic management. The proposed AVM system operates on 900 MHz frequencies and utilizes equipment built by Amtech Corporation ("Amtech").<sup>4</sup>

AVM systems are regulated in part by Section 90.239 of the Commission's Rules. This rule section contains a channeling plan that makes available the 903-904 MHz, 904-912 MHz, 918-926 MHz and 926-927 MHz band segments for AVM use.<sup>5</sup> The 903-904 MHz and 926-927 MHz channels are available only on a developmental basis in accordance with Subpart Q of Part 90 of the Commission's Rules.<sup>6</sup> The remainder of the 902-928 MHz band is currently unavailable for non-government AVM use.

<sup>1</sup> 47 C.F.R. § 90.239(c).

<sup>2</sup> As further explained below, the Texas Turnpike Authority also is seeking to use frequencies in the 904-912 MHz and 918-926 MHz sub-bands. Under the current Rules, such authority does not require rule waiver.

<sup>3</sup> As a governmental agency, the Texas Turnpike Authority is exempt from any filing fees imposed by the FCC. See 47 C.F.R. § 1.1112(b).

<sup>4</sup> A complete description of this technology is included in the attached FCC Form 574 application package.

<sup>5</sup> See 47 C.F.R. § 90.239(c).

<sup>6</sup> § 90.239(c)(2).

*Need 14 contiguous MHz  
of spectrum*

*This is what  
the turnpike industry  
needs*

900 MHz AVM operations are currently the subject of a Notice of Proposed Rule Making in PR Docket No. 93-61.<sup>7</sup> In that proceeding, the Commission is attempting to decide what portions of the 902-928 MHz band should be available for different types of AVM systems.<sup>8</sup> In this proceeding, certain parties have strenuously object to AVM toll collection systems operating in the 904-912 MHz and 918-926 MHz portions of the band and have filed petitions to deny such operations.<sup>9</sup>

**REQUEST FOR WAIVER:** The Texas Turnpike Authority seeks authority to operate its proposed AVM system at 12 different locations on discrete frequencies in the 912-918 MHz sub-bands as specified on the attached application. It is requested that use of these frequencies for this purpose be authorized on a non-developmental primary basis.<sup>9</sup> The requested authority requires waiver of the provisions of Section 90.239(c) to be able to operate on frequencies in the 912-918 MHz bands that are not normally assigned for AVM operations. Because the technology to be used has been successfully deployed at more than 1400 sites heretofore by others, the developmental condition is not appropriate.

The Texas Turnpike Authority also is seeking to operate on discrete frequencies in the 904-912 MHz and 918-926 MHz band. These requests conform to the current version of Section 90.239 and do not require rule waiver. While it would be preferable to avoid these frequencies to ensure against any harassing litigation, the Texas Turnpike Authority simply cannot satisfy its needs on frequencies that are located outside of these two 8 MHz sub-bands. The Texas Turnpike Authority has worked with its equipment supplier, however, to develop a frequency use plan that minimizes operations in these two 8 MHz sub-bands. For example, the Texas Turnpike Authority plans to use transmitters that operate with less than two megahertz of separation between adjacent lane, co-located transmitters that has heretofore been employed for such equipment. Even so, the Texas Turnpike Authority's toll plazas at the proposed sites contain 45 traffic lanes requiring 45 transmitters.

Also, all proposed operations within the 904-912 and 918-926 MHz bands will be confined to the edges of this channel in an attempt to minimize co-frequency operation with the center frequency of this sub-band. At this time, the Texas Turnpike Authority is unaware of any other systems currently operating in the edge frequencies of the 904-912 MHz sub-band as in the 918-926 sub-band, so further cooperative efforts are impossible. Of course, the Texas Turnpike Authority accepts its responsibility to fully cooperate with other licensees in the shared use of this spectrum.

<sup>7</sup> Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, 8 FCC Red 2502 (1993).

<sup>8</sup> See e.g., In the Matter of Port of Oakland, Applications for Private Land Mobile and General Mobile Radio Services, file no. 342754, October 20, 1992.

<sup>9</sup> The Texas Turnpike Authority recognizes its secondary status to both government operations and ISM devices when operating in the 902-928 MHz band.

Federal Communication Commission  
March 7, 1994  
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**PUBLIC INTEREST:** Grant of this waiver request would serve the public interest in facilitating timely construction of an AVM system to speed traffic flow through the Dallas North Tollway toll plazas. Furthermore, operation of this technology on the currently unavailable frequencies may provide the Commission with useful information regarding the operation of low power tollway tag readers in the aforementioned frequency bands.<sup>10</sup>

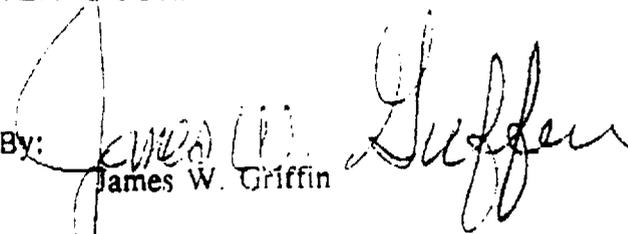
Waiver of the developmental provisions of Section 90.239 serves the public interest. At the current stage of development of AVM equipment, no rationale exists for imposing such a restriction on stations utilizing the Amtech equipment. Amtech's tollway technology has been installed in over 250,000 vehicles<sup>11</sup> and has proven to be a good spectrum neighbor notwithstanding the current controversies.

By this proposed operation, the Texas Turnpike Authority is accepting significant burdens in the hopes of avoiding contention. The use of non-standard transmitters requires the purchase of customized crystals which is costly both in terms of time and money. Finally, the Texas Turnpike Authority understands that all AVM operations authorized under Section 90.239 are subject to the final outcome in PR Docket No. 93-61.

**CONCLUSION:** For the reasons provided above, the Texas Turnpike Authority seeks prompt Commission action on this Request for Waiver. This action would serve the public interest by allowing the timely implementation of the Texas Turnpike Authority AVM system.

Respectfully submitted.

TEXAS TURNPIKE AUTHORITY

By:   
James W. Griffin

Its: Deputy Director

Date: March 7, 1994

<sup>10</sup> This does not imply, however, that the Commission should view this proposed use as a test program to develop a permanent sharing solution for the 902-928MHz AVM band.

<sup>11</sup> See Opposition to Petition for Rulemaking, Amtech Corporation, RM-8013, filed July 23, 1992 at 11.

nlg

cc: Amtech Corporation

ONT 208  
FCC License File

August 1994

Mr. Reed Hundt  
Chairman  
Federal Communications Commission  
Washington, D.C. 20554

Re: PR Docket No. 93-61

Dear Chairman Hundt:

As leaders in the Electronic Toll and Traffic Management (ETTM) industry and suppliers of virtually all of North America's operational Automatic Vehicle Identification (AVI) systems, we are deeply concerned about the confusion that exists regarding the preferred frequency for AVI systems. For short range vehicle to roadside communications, we vigorously support the use of the 902 - 928 MHz band for AVI in North America and we oppose the adoption of 2.45 GHz.

Our support for this frequency band is based on technical performance, user cost, and regulatory policy considerations:

- **Technical Performance.** The 902 - 928 MHz band has proven itself extensively in actual toll operations. No site is experiencing interference which adversely impacts AVI operations. Because AVI systems operate only over very short distances, they are highly spectrum efficient and pose no operational interference threat to other AVI or LMS systems, nor to other authorized radio devices, including unlicensed Part 15 devices. There is no technical basis to believe that the 2.45 GHz band offers equal, let alone better performance than the 902 - 928 MHz band and there is a risk that it could be worse, given the lack of real-world 2.45 GHz experience in North America. Those who advocate the use of 2.45 GHz ignore the fact that there are over 30 times as many FCC operating licenses for non-ETTM applications in this band as compared to the 902 - 928 MHz band. Furthermore, early generation 2.45 GHz AVI systems installed in Europe are scheduled to be replaced with a yet-to-be-defined European standard. We do not mean to exclude the possibility of future migrations to other frequency bands, particularly as global standards evolve. However, any changes are several years away and will not, we believe, result in use of the 2.45 GHz band for AVI systems.
- **Regulatory Policy.** FCC regulations do not allow licensed AVI equipment operation in the 2.45 GHz band while licensed operation is allowed in the 902 - 928 MHz band. Restarting the FCC AVI rule making process for the 2.45 GHz band is likely to result in a multi-year review process while non-AVI users argue for consideration. And there is no assurance that the result will accommodate AVI needs. In the interim, AVI users considering 2.45 GHz systems would either have to make a leap of faith about the FCC's eventual ruling or postpone their procurement decisions. Neither of these outcomes is good for users and the costs of this delay will be absorbed and reflected in industry prices.
- **User Costs.** Our firms offer a variety of 902 - 928 MHz AVI systems. The industry is very competitive and users have reason to expect continuing product innovation and declining prices as additional systems are deployed. Current and future systems will continue to benefit from the large number of commercially available Part 15 components available in this frequency range. A precipitous jump to the 2.45 GHz band would result in substantial industry R&D and productization investments which must be recouped from our customers and would

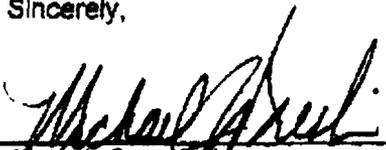
yield no operational or functional benefit. Also, since the shorter 2.45 GHz wavelength is inherently less efficient, radio components, even in volume, are significantly more expensive. The substantial investment made by toll operators in 902 - 928 MHz equipment would have been wasted.

The future of this growing industry depends on the Commission's finalizing rules for the 902 - 928 MHz band. The FCC has been considering Docket 93-61 for over a year. This notice of proposed rule-making confirms AVI status by granting "co-primary" status to AVI systems. Several techniques for sharing the band among its subscribers are being considered, any one of which will assure AVI operators continued interference-free operations. It is urgent that the FCC act quickly to finalize this proceeding. The on-going delay in this process has created uncertainty among users about the Commission's plans for the band and for AVI technologies. Several states have issued requests for proposals seeking AVI systems operating at 2.45 GHz rather than the 902 - 928 MHz band, based on the perception that the FCC has abandoned support for AVI in this frequency range. Fortunately, none of these states have yet implemented a system at this less desirable frequency. Further delay in Docket 93-61, however, will only increase these false perceptions and the level of confusion and uncertainty in the marketplace.

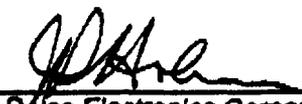
We urge the FCC and all in policy making/influencing positions in the user community to unite behind use of the 902 - 928 MHz band for AVI systems. We wish to send a clear message that ETTM industry leaders are united in their purpose and goals. Now is the time to implement proven AVI systems which benefit the motoring public with the inherent cost savings and convenience that we know are possible with today's technology.

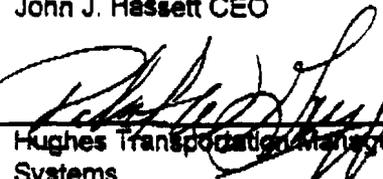
Any of our firms will be happy to answer your questions or provide additional information on this crucial issue. Please do not hesitate to contact any of us.

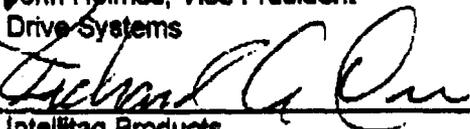
Sincerely,

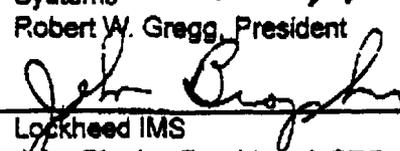
  
Amtech Corporation  
Michael J. Breslin, Sr. Vice President

  
AT/Comm, Inc.  
John J. Hassett CEO

  
Delco Electronics Corporation  
John Holmes, Vice President  
Drive Systems

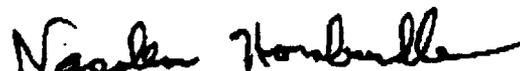
  
Hughes Transportation Management  
Systems  
Robert W. Gregg, President

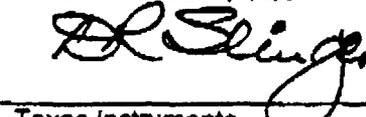
  
Intellitag Products  
Richard A. Orr, General Manager

  
Lockheed IMS  
John Brophy, President & CEO

  
Mark IV Industries Limited  
Kelly Gravelle, Vice President

  
MFS Network Technologies, Inc.  
Kevin P. Moersch, CEO

  
Motorola, Inc.  
Napoleon Hombuckle, Corporate Vice  
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David R. Slinger  
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MFS Network Technologies, Inc.  
Scott Mosley

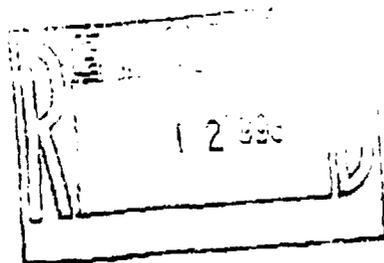
(402) 536-3633

Motorola, Inc.  
Napoleon Hornbuckle

(602) 441-3551

Texas Instruments  
David R. Slinger

(508) 699-1639



**TEXAS  
TURNPIKE  
AUTHORITY**



3015 Raleigh Street • P.O. Box 190369  
Dallas, Texas 75219  
Phone 214/522-6200  
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July 6, 1993

Ms. Donna R. Searcy  
Secretary  
Federal Communications Commission  
1319 M. Street, N.W. Room 222  
Washington, D.C. 20554

Dear Ms. Searcy:

The State of Texas, as well as a number of other states, through their state turnpike authorities, either have instituted or plan to institute within the next several years, a new system of electronic toll collection ("ETC") procedures which ensure a far more rapid and efficient means of collecting tolls. These ETC efficiencies also reduce the time lost and the costs incurred by patrons using turnpikes, significantly reduce internal combustion engine generated air pollution in the urban areas in which the U.S. turnpikes primarily serve, and conserve fossil fuels, each of which advance our national goals. In order to continue the advances of ETC systems, it is imperative that the turnpike industry in the United States have adequate spectrum access in the 902-928 MHz frequency ranges.

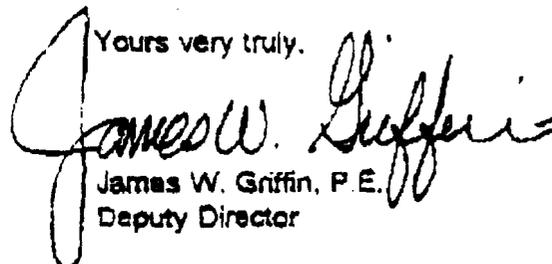
The Texas Turnpike Authority as an active member of the International Bridge, Tunnel, and Turnpike Association ("IBTTA") opposes the Notice of Proposed Rule Making ("NPRM"), PR docket 93-51. If this NPRM were permanently adopted and therein change the interim regulations governing the industrial, scientific, and medical ("ISM") uses of the 902-928 MHz spectrum currently available for use by the turnpike authorities in the U.S. for ETC, electronic toll collection and traffic management ("ETTM"), automatic vehicle identification ("AVI") and intelligent vehicle highway systems ("IVHS"), there would not be adequate spectrum remaining for the departments of highways and turnpike agencies of the United States to operate ETC, ETTM, IVHS, and AVI systems either already in use or planned for future national highway transportation enhancement. If this NPRM were adopted as currently written, it would provide an exclusive use status to one particular type of IVHS application, namely a vehicle location and tracking system. Such vehicle tracking systems were designed to co-exist in the 902-928 MHz spectrum range with ETC, ETTM, AVI, and IVHS applications. To remove ETC, ETTM, AVI and IVHS from the 902-928 MHz spectrum would retard severely the advances made in recent years increasing the traffic handling capacity and efficiency of our nations turnpikes and tax financed highways. A reserved 902-928 MHz spectrum is vital to the future of the turnpike agencies of this country and will enhance the U.S. goals of reducing air and noise pollution, containing public travel costs, and conserving energy.

MEMBER: LUTHER G. JONES, JR., CHAIRMAN, CORPUS CHRISTI • MICHAEL T. CROU, VICE CHAIRMAN, HOUSTON  
LAY C. STORDE, JR., CORPUS • MURRY E. BLINCK, III, SAN ANTONIO • JAMES H. KUNS, PLANO • CLIVE BIRNIELLS, HOUSTON  
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KATHERINE A. KIRKNER, HOUSTON • PHILIP MONTGOMERY, DALLAS • JOHN S. LAMMING, EXECUTIVE DIRECTOR • HARRY KABLE, SECRETARY-TREASURER

Ms. Donna R. Searcy  
Federal Communications Commission  
July 6, 1993  
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A detailed technical analysis of the amendment of Section 90.239 of the FCC's rules to adopt Permanent Regulations for Automatic Monitoring Systems, RM-8013, PR Docket No. 93-81, FCC No. 93-141, as prepared by the IBTTA, is attached as an amendment to this letter of the Texas Turnpike Authority expressing its position in this matter. This Agency urges the FCC to maintain and make permanent the current interim regulations governing the use of ISM in the 902-928 MHz spectrum, to deny adoption of the proposed NPRM as set forth in PR Docket 93-81, and to issue regulations permanently assigning 902-928 MHz frequencies to the state agencies currently holding such interim frequency licenses for ETC, ETTM, AVI, and IVHS applications.

Yours very truly,



James W. Griffin, P.E.  
Deputy Director

cc: Ralph Haller, Private Radio Bureau  
bcc: IBTTA Headquarters  
ntg