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

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| In the Matter of | ) | |
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| Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands | ) | ET Docket No. 95-183<br>RM-8553 |
| | ) | |
| Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz | ) | DOCKET FILE COPY ORIGINAL |

**COMMENTS OF TELCO GROUP, INC.**

These comments are submitted on behalf of Telco Group, Inc. (TGI). TGI is a long-time provider of backbone microwave communication services. TGI does not provide service to end users of communications services but, rather, supplies network support, construction and design services to other companies which have internal communications needs. In this capacity, TGI is an applicant for custom-tailored 39 GHz authorizations in three markets in Texas. It had planned to seek authorizations for at least three other markets in Texas in the summer of 1995 with the intent of constructing facilities and providing service almost immediately upon grant of its applications. Instead, it found that the available frequency pairs in most of the major markets in Texas had already been filed for or licensed to other entities. To the best of TGI's knowledge, none of these other entities has

instituted service under their authorizations to any significant degree. It is therefore imperative that the Commission (1) open up these fallow frequencies to users with a legitimate and pressing need for service and (2) make the frequencies available on a basis which will discourage speculation and maximize intensity of use.

## EXECUTIVE SUMMARY OF COMMENTS

- Existing 39 GHz spectrum has been seized by speculators who have no intention of providing service. Non-users of current authorizations should be ousted almost immediately.

- The FCC has greatly overestimated the demand for this spectrum based on the illusion created by speculative filers.

- PCS users will form only a subset of the probable future users of the spectrum. The FCC should not tailor the entire licensing scheme to the desires of PCS users.

- It will be more spectrally and environmentally efficient to license this spectrum to non-PCS users, thus permitting and encouraging consolidation of sites and reduction of site clutter.

- PCS and non-PCS customers could access backbone facilities according to their needs.

- Geographic licensing by BTA incorrectly presumes an exclusively PCS-related use. Licensing should be based on much smaller service areas which are more nearly related to the needs of actual customers.

- Auctions are inappropriate for this service given the very limited number of legitimate users expected. Redemption of the existing 39 GHz licenses, together with opening of the 37 GHz spectrum, should more than meet all expected demand without any mutual exclusivity.

- Unlike omnidirectional spectrum uses, point to point spectrum uses are revenue-limited.

- Channel pairs should not automatically be awarded to certain CMRS providers. This would constitute an unwarranted and unneeded giveaway to licensees who are already spectrum-rich.

- TGI agrees with the FCC that this spectrum should not be used for point to multipoint purposes. Such use would significantly impair the availability of this spectrum for the primary point to point use.

- Existing bandwidth and transmission speed standards should not be altered without ascertaining the degree to which there is substantial embedded investment by manufacturers in

present standards.

- Fairness to applicants who filed prior to the November 13 freeze should be processed under new processing standards. At a minimum, those applicants' application fees should be refunded.

## I. By Significantly Tightening Usage Requirements, the Commission Can Ensure That There Is Ample 37 - 39 GHz Spectrum For All.

Though licensee-defined use of the 39 GHZ band was authorized by the Commission more than 20 years ago, that enormous segment of the spectrum lay largely fallow until the last few years. Then, suddenly, in a stampede reminiscent of the Oklahoma land rush, spectrum speculators in the last two years have elbowed each other to obtain authorizations for vast amounts of fertile and untilled electromagnetic territory. Before the Commission tightened up its processing guidelines in 1994, some companies were applying for - and being granted - as many as four channel pairs in a single metropolitan area. This virtual feeding frenzy of activity has created a largely false impression that there is a great deal of pent up demand for this spectrum. In fact, the realistic users of the spectrum are relatively limited. The comments in this proceeding will presumably confirm TGI's understanding that there are only a handful of carriers who are actually providing service in this band on a commercial basis anywhere in the United States. Equipment vendors can confirm the

dearth of orders they have received. To the extent that there is any use by speculators at all, it is often on a "toe-in-the-door" basis designed more to preserve a license than to provide a needed service.

The Commission has seen a similar mentality prevail in circumstances when it opened one day filing windows for low power television, IVDS, 220 MHz and other newly available bands. The fear of being excluded led many applicants - often prodded by mass application preparers - to file applications everywhere they could with no clear idea of how the stations would be constructed or what they would really be used for. When the dust settled several years later, many of the licenses awarded in this way had been turned in, cancelled, sold, or otherwise abandoned by applicants who had been betting on the come all along. Though here there was no one day window, the same psychology has clearly been at work and the same result is likely to occur: the vast majority of the existing authorizations will never be put to any spectrally efficient use, if indeed they are put to use at all.

The Commission's initial task, therefore, must be to clear out the regulatory debris which is now clogging the existing 39 GHZ band. TGI proposes a recapture plan which is somewhat stricter than that proposed by the Commission in the NPRM. It should include the following elements:

a. Existing permittees would have six months from the completion of this rulemaking (or until the end of their construction period, whichever is earlier) to implement construction and operation of their systems under the guidelines set forth in paragraph (c) below. If a notification of completion of construction in compliance with those standards has not been filed in that period, the construction permits would be automatically cancelled and made available for new filers.

b. Existing licensees would be given six months from the completion of this rulemaking to reach the thresholds set forth below. If they have not reached that threshold, their licenses would be revoked. Any facilities which had been put into operation but which do not meet the threshold will be grandfathered upon the filing of a 494A for those specific facilities.

c. The threshold noted above should be a minimum of one link (i.e., both a transmit and a receive station) per ten square mile area. By the end of the third year of license, a licensee must have reached a threshold of three links per ten square miles. By the sixth year, the level should be five links. Failure to hit any of the specified benchmarks in the post-licensing period would result in the loss of expansion rights and grandfathering of the existing links for the remainder of the license term. The failure to reach the middle threshold would be grounds for non-renewal of the grandfathered stations at the end of

their license term.

d. Permittees or licensees with more than one channel block would be required to give up the additional channel blocks absent a compelling showing that there is an immediate need for more than one block and that any existing facilities cannot feasibly be migrated onto one channel block.

These suggested guidelines are aggressive, but properly so. The channels involved here represent a full 50 MHZ of spectrum which can be employed over huge chunks of territory. The spectrum can be enormously valuable to a licensee who puts it to effective use but is also an enormous waste if a licensee uses it carelessly, inefficiently, or not at all. By eliminating the pure speculators from the field and serving notice that future licensees will be held to firm construction and usage criteria, TGI is confident that the FCC can not only eliminate the current crowding of the licensing process, but very quickly ensure that all legitimate users of the spectrum are able to obtain licenses.

## II. Auctions Are Unnecessary

If the procedures outlined above are adopted, TGI believes that the need for auctions will be eliminated. The purely speculative permittees and licensees will be weeded out and only serious applicant with long term interest in developing the band

will be left. TGI believes that of the 14 existing channel pairs in the 39 GHZ band, only a few will turn out to be authorized to serious users. Even taking into account new demand stimulated by potential PCS users, the recapture of the channels should be more than adequate for projected uses. The availability of sixteen additional channel blocks in the 37 GHz band should supply a large reservoir of additional capacity in the very unlikely event that the 39 GHz band is consumed. Indeed, perhaps the best approach would be to begin licensing the clear 37 GHz channels immediately upon adoption of the new rules. Then the currently licensed or authorized channels in the 39 GHz band will begin to open up in the future as the existing licensees and permittees fail to meet their thresholds and turn in or forfeit their authorizations.

The key point to remember here is that the "demand" for these frequencies which might be deduced from the scramble for licenses in the last two years is entirely illusory. The actual demand is relatively small to the point that an auction (under the threshold criteria suggested above) might not even generate mutually exclusive applications.

## III. The Best Use For these Bands Is As a Backbone Infrastructure for Multi-Use Customers

The NPRM in this Docket seems to be predicated on the assumption that this spectrum will be largely devoted to PCS use. This assumption is not well founded. TGI has been in the business

of providing "last mile" communications service for some ten years. It is TGI's assessment that PCS will very likely have service demands in this area, but it will not be the only, or even the most important, end user. Narrowband service providers such as Metrocomm, Radiomail, Aires, and others are very likely users of the infrastructure as well. More and more companies are expected to use shorthaul microwave facilities as an alternative to local exchange telephone lines or other alternative services. On the other hand, most such users, including PCS carriers, are unlikely to have sufficient traffic to justify their own licenses for these channels.

It is TGI's vision that these channels would become an alternative broadband and narrowband data distribution network. As PCS and cellular, and other wireless technologies expand their networks of transmitter sites, it will become more and more important from an environmental and zoning standpoint to avoid clutter at key locations. We envision that many sites will be served by several different such carriers, as well as having antennae for the internal needs of large corporations. Rather than sprouting a plethora of antennas at each site, a backbone facility of the kind proposed by TGI could nondiscriminatorily serve many potential users at the same site. For example, two or three PCS carriers, a cellular carrier, a large corporation with an internal communications system and other narrowband users such as Metrocomm could all funnel their traffic through a single on-site antenna,

linking up with the remainder of their networks at whatever point they desired. Environmental and electromagnetic clutter would be significantly reduced and the use of this particular spectrum would be maximized. Companies like TGI would become an effective source of competition for the landline and wireless local exchange carriers. On the other hand, under the scheme which underlies the Commission's plan, these channels would simply become underused inter-site links for PCS carriers. The potential for these channels is too great to squander them in that fashion.

Accordingly, TGI proposes the exact converse of the Commission's proposal at paragraph 102 of the NPRM; instead of reserving channels in this band for PCS, cellular and other CMRS licensees, the Commission should reserve at least half of the channels for non-CMRS providers. This course is likely to maximize the use of the spectrum for CMRS and non-CMRS applications alike.

Another argument against auctioning this spectrum is that, unlike point to multipoint services, a licensee in a point to point service cannot increase revenue by adding additional points of communication. It can only increase the efficiency of use of the bandwidth along particular paths, and that efficiency is constrained by technical limitations. The almost infinite revenue potential that is present in other services which have been auctioned is simply not available here.

## IV. The Commission Should Retain Licensee-Defined Service Areas Rather Than BTAs

The Commission's plan to license the 37 GHz spectrum on BTA lines comports with the plan to make this essentially an auxiliary service to PCS and cellular. This would be a mistake. In most cases, BTA licensing would be wholly inappropriate for this service, which is well suited for shorthaul traffic in relatively dense areas but not for long haul in rural areas. By adopting a BTA scheme, the Commission would ensure that very substantial portions of the BTAs would have no actual service on these frequencies but would also not be available to other users. The original concept in licensing the 39 GHz band back in 1974 was a good one: let the user define the area in which it has a real need, but then insist that the licensee actually use the frequency in that area. Under this arrangement, the number of licensees in a given metropolitan area should be maximized, with each licensee putting its license to the best use in its own territory.

To retain the character of these licenses as wide area grids, however, TGI would suggest that applicants would be required to define a rectangular grid no smaller than 100 square miles and no larger than 300 square miles. Because of the strict build-out criteria, applicants would have a real incentive to only apply for appropriately sized areas which they genuinely plan to build out.

## V. Spectrum Cap

As a result of the speculative fever surrounding the 39 GHz channels in the last two years, many applicants have filed for channels all across the United States. The capital needed to actually construct and operate this vast number of systems, particularly under the criteria proposed here, would probably approach a billion dollars. It would be myopic for the Commission to assume that any of these applicant/permittee/licensees are capable of generating that kind of capital, particularly since the actual expenditure of funds to date has been virtually nil. The Commission can compel such applicants to make serious choices about where, if anywhere, they really want to construct and operate a 39 GHz system by limiting them to no more than 600 MHz of spectrum from the 37 - 39 GHz band nationwide. This would permit firms to have as many as twelve 50 MHz systems across the country. To accommodate CMRS licensees with far-flung holdings, this number could be expanded for those firms who have more than 12 PCS or cellular licenses and wish to have associated 37 - 39 GHz systems. Adoption of this spectrum cap would also significantly reduce the pending applications for 39 GHz channels and permit most to be issued on a non-mutually exclusive basis.

## VI. Processing of Pending Applications

In fairness to applicants with pending applications, the

Commission should proceed to process all applications that had been accepted for filing as of the November 13, 1995 freeze. However, the Commission should first require the applicants to conform the applications to the geographic limits set forth above. The applicants could be required, at the same time, to submit a form which (1) would permit the Commission to readily identify the geographic coordinates filed for, (2) would commit the applicant to specify that its application is for any available 39 GHz channel in the area applied for, and (3) would confirm that the applicant wants its application to continue to be considered under the new build-out and use criteria and that the grant of the subject application would not put it in excess of the spectrum cap noted in Section V, supra. Then the Commission could group the applicants by geographical mutual exclusivity. If sufficient frequencies are available to satisfy all applicants, all applications would be granted. If not, the applications would be granted in sequence of filing date, and those not granted would be queued to await the opening up of channels under the recapture program.

In any case, any applicants whose applications are dismissed without further processing because of non-compliance with the new rules should be eligible for fee refunds.

**VII. Miscellaneous Matters**

A.) Any changes in the bandwidth or the transmission

speed standards should be undertaken only after confirming with manufacturers that the new standards are feasible and will not result in the obsolescence of a great deal of equipment which is now ready for shipment.

B.) No part of the 37 - 39 GHz band should be allocated for point to multi-point purposes. There are frequencies available for multi-point applications and there has been no showing that those frequencies are insufficient for the purpose. Moreover, by permitting multi-point use, the overall ability to use and re-use these frequencies in a defined area would be significantly reduced. The frequencies lend themselves to short-haul point to point applications, and any other use would be less efficient.

**VIII. Conclusion**

While TGI strongly supports the Commission's plan to allocate new channels in the 37 - 39 GHz band and to optimize the use of the existing channels, TGI believes the Commission's approach must be more rigorous in weeding out the many speculative applications which have been filed and granted. TGI also believes that the Commission's tentative approach to licensing this spectrum would tie these frequencies too closely to the PCS service. They would be reduced under that approach to nothing more than an adjunct to CMRS service. TGI believes that with proper discipline at the outset, the 37 - 39 GHz band could grow into a multi-

dimensional backbone service provider which can handle the needs not only of PCS providers but numerous other communications customers as well.

Respectfully submitted,

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