

ORIGINAL

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

In the Matter of

Petition for Declaratory
Ruling Concerning the
Commission's Streamlined
Antenna Clearance Procedure

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) WT 95-15
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JUN 04 1996

To the Chief, Wireless Telecommunications Bureau:

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PETITION FOR DECLARATORY RULING

Submitted by:

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SUMMARY

The Commission has recently adopted an antenna structure registration process under which each antenna structure must be registered with the FCC by its owner. One of the principal reasons behind this registration program is to enhance the safety of air navigation.

As with any new rule or process, there are questions, controversies, or uncertainties which arise. In particular, in the case of these new rules, the Commission has promulgated rules designed to give great latitude to registrants, but has failed to define certain quintessential accuracy requirements to be adhered to by the registrants. This petition seeks to clarify or correct the issue of accuracy requirements which apparently was overlooked or ill-considered by the Commission when it adopted its rules. In short, as will be shown herein, a process apparently condoned by the Commission's rules could allow for the height of structures to be in error by over 511.8 feet or more, thereby creating a real threat to air navigation safety.

Additionally, this petition seeks clarification as to several minor issues as to registration responsibilities when there are multiple antenna structures located on the rooftop of a building; and registration responsibilities when an existing structure is modified to a greater height by another party.

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To the Chief, Wireless Telecommunications Bureau:¹

PETITION FOR DECLARATORY RULING

1. Teletch, Inc. ("Petitioner"), by its Secretary/Treasurer, and pursuant to Section 1.2 of the FCC Rules, hereby files this petition for a declaratory ruling concerning the Commission's streamlined antenna clearance procedure which was adopted in a Report and Order ("R&O") in WT Docket No. 95-5.² In the R&O, the Commission adopted rules to streamline the Commission's antenna structure clearance process and established a registration process that applies to the owners of antenna structures. Petitioner is the owner or site manager of over 250 antenna sites located throughout the United States. Accordingly, the R&O has a direct

¹ If the Chief, Wireless Telecommunications Bureau finds that the issues raised in this petition cannot be acted upon pursuant to delegated authority under 47 C.F.R. §0.331(a)(2), then Petitioner requests that this Petition be forwarded to the full Commission for expedited action.

² *Streamlining the Commission's Antenna Structure Clearance Procedure*, WT Docket No. 95-5, 10 FCC Rcd 2771, released November 30, 1995.

and material impact upon the Petitioner.³ Petitioner requests a declaratory ruling to terminate a controversy and/or to remove uncertainty as to several issues relative to the R&O.

I. GEODETIC DATA ACCURACY

2. Some discussion was had in the R&O as to whether the Commission should require owners to specify site latitude and longitude to the nearest second and structure height to the nearest meter.⁴ In response thereto, the Commission decided that it "will request location data in terms of degrees, minutes, and seconds, and height data to the nearest meter."⁵ Further, the Commission advised, "[t]he antenna structure registration database will accept latitude and longitude data... up to an accuracy of one second and height to one meter."⁶

3. The Commission has left it to the discretion of each owner as to which "surveying tools of differing accuracy, such as maps,

³ Further, since a substantial percentage of Petitioner's antenna sites are located in Michigan, which is the first "window" for registration - and will likely have to dedicate substantial resources to the survey and registration process in order to timely comply - it is imperative that Petitioner be absolutely clear as to the requirements of the FCC's rules so as to avoid the necessity and expense of having to expend resources yet another time.

⁴ R&O, ¶29.

⁵ R&O, ¶33.

⁶ *Ibid.*

GPS receivers, or GPS receivers with differential corrections"⁷ to utilize to obtain site data, and for each owner to "evaluate the surveying method being used and round to the appropriate significant digit."⁸

4. In the draft "Instructions for Completion of FCC Form 854" included in the appendix to the R&O, Petitioner notes that the instructions for Item 3 of FCC Form 854 state as follows:

"Enter the geographical coordinates in degrees, minutes and second, rounded to the nearest second, for the antenna structure location. These coordinates are an important part of the location description. Do not estimate what they may be... [T]he latitude and longitude **should** be accurate to plus or minus one second for the structure location." [Emphasis added.]⁹

5. What is not clear to this Petitioner is to what accuracy the Commission requires that geodetic latitude and longitude information must be determined and provided to the Commission. While the Commission, in its R&O, has clearly stated that its will request location data in terms of degrees, minutes and second, and that the registration database will accept said data up to an accuracy of one second, the Commission has not expressly stated that the data to be submitted shall be accurate to the nearest

⁷ *Ibid.*

⁸ *Ibid.*

⁹ Petition notes that the word "should" is permissive or elective, but not directive or mandatory. On the other hand, use of the words "must" or "shall" would be directive or mandatory.

second.

6. Petitioner's point of confusion becomes further compounded when the Commission specifically states in its R&O that owners "may use surveying tools of differing accuracy, such as maps, GPS receivers, or GPS receivers with differential corrections to obtain site data."¹⁰ As the Commission noted in a footnote to that very statement in its R&O, GPS receivers without differential corrections may be accurate to +/- 100 meters (approximately 3.3 seconds of latitude and/or longitude) horizontal, and 156 meters vertical.¹¹ ¹² Further, although the Commission stated that "[s]even and one-half minute geological maps may yield accuracies within 1 second,"¹³ the National Geodetic Survey espouses that map scaling yields accuracies of +/- 6 seconds.

7. Given the fact that the Commission, in its R&O, is allowing owners the option to utilize such inaccurate methods, as map scaling and GPS receivers without corrections, to determine geodetic location data; it appears, then, that the Commission is also espousing no accuracy standard, or an accuracy standard of +/-

¹⁰ *Ibid.*

¹¹ R&O, footnote 51.

¹² The inaccuracy of GPS receivers without corrections (correctly, differential corrections) is due to an intentional degradation of the satellite information, termed Selective Availability, done by the United States Department of Defense.

¹³ *Ibid.*

6 seconds.

8. Petitioner sought informal resolution of the question with regard to geodetic data accuracy through Internet e-mail communication with Commission staff.¹⁴ Petitioner posed the following question:

"In the [R&O], the FCC left it up to the [owner] to use any of a number of sources to determine geodetic latitude, longitude and elevation data - including maps, GPS receivers (without corrections), and GPS receivers (with corrections.) ... In [the cases of topographic maps and GPS receivers without corrections], the accuracy to be expected is worse than the minimum accuracy required by the Commission (nearest second). Some people are already using the latitude/longitude information they obtained from inexpensive GPS receivers which are incapable of corrections, thinking that this data is accurate enough. If the accuracy and integrity of the database is of paramount importance, does the Commission intend to issue a public notice, fact sheet, or otherwise, clarifying the need for accuracy, and cautioning registrants that maps and GPS receivers without correction may not provide the necessary accuracy?"

To which the Commission staff replied:

"Your premise is incorrect. Specifically, the [R&O] did not set forth an "accuracy standard" for determining tower coordinates or height. It did clarify two points (sic) however -- (1) the FCC retains data in its database to the nearest second (no fractions thereof), and (2) an owner should be aware of the accuracy of

¹⁴ In this regard, the Wireless Telecommunications Bureau had issued a Fact Sheet (#15) which attempted to convey information about the impending new procedure. Persons with questions were instructed to send the questions via Internet e-mail to the Commission for a prompt reply.

the method being used to determine the coordinates/height of the structure and round to the appropriate significant digit. Setting forth a new accuracy standard is beyond the scope of the registration process and might necessitate the re-surveying of every antenna structure in the country. That is not the case here."

9. If, the Commission is specifically stating that an owner may utilize a GPS receiver without correction, which has a horizontal accuracy with a certainty of approximately +/- 3.3 seconds and a vertical accuracy with a certainty of approximately +/- 156 meters, then it would seem that the Commission is espousing a *de facto* accuracy standard on the order of "any number that is somewhere in the ballpark will suffice."¹⁵ Further, since this Petitioner was admonished by the responding Commission staff member that the R&O did not set forth an accuracy standard, then would it seem reasonable to conclude that an owner can utilize anything he or she desires to determine the latitude, longitude and height of an antenna structure, not the least of which could include, for example, determining latitude and longitude based upon the distance

¹⁵ If this is so, then the Commission's stated purpose of requiring registration in the first place - to promote aviation safety - is a falsehood. The fact that the Commission, in its R&O, explicitly approves the use of instrumentation with a predictable vertical accuracy of +/- 156 meters (511.8 feet) is blatantly negligent on the part of the Commission, and threatens the safety and welfare of all aviation navigation. Should a single aviation accident occur because of reliance upon inaccurate information maintained in the Commission's database, each and every Commissioner and Commission staff employee responsible for the R&O should be held personally and individually liable, both civilly and criminally.

from a known high-accuracy benchmark measured by counting the number of heel-to-toe shoe lengths from the benchmark to the antenna structure? And, for structure height, would it seem reasonable that measuring same by dropping a penny from the top of the structure and determining the height of the structure based upon the time it takes for the penny to hit the ground measured using a sand-clock or sundial, would also be acceptable to the Commission?

10. Putting all sarcasm aside, clearly it would not be reasonable to assume that shoe lengths or time measurements using sand-dials would provide acceptable accuracies. Further, it would also seem reasonable to assume that the Commission, indeed, has or should have accuracy standards, either set forth in its rules or *de facto*, which apply to the antenna registration procedure.

11. For example, nowhere in the broadcast rules (Part 73) is there any directly-promulgated requirement for a specified accuracy of latitude and longitude as specified on an application. However, the Commission routinely returns applications where the geodetic coordinates are not accurate to the nearest second. In a broadcast case, the Division returned an application and refused to accept amendment or resubmission of same because of an error of 3 seconds in the longitude specified in the application from the actual longitude. In that matter, the Division ruled that the absence of the exact coordinates, to the nearest second, makes it impossible

to determine the veracity of the site availability certificate, the environmental impact statement, the information supplied for FAA approval, and the distance from the proposed site to other proposed or existing broadcast facilities.¹⁶ Broadcast applicants are required to show their proposed geographic coordinates to the nearest second, and an applicant's failure to specify geographic coordinates accurate to the nearest second is basis for dismissal of the application.¹⁷

12. In other radio services, there are other rules which clearly state that "geographical coordinates must be specified... to the nearest second of latitude and longitude."¹⁸ Clearly, the Commission did not intend the term "specified... to the nearest second" to mean "the approximate location specified in degrees, minutes and seconds, with seconds being set forth in whole numbers and no fractions"; to the contrary, it is reasonable to conclude that the Commission, either implicitly or explicitly, meant "the precise antenna location specified in degrees, minutes, and seconds, with any fractional seconds being rounded and accurate to the nearest whole second."

13. As has been shown, there is a controversy or material

¹⁶ *Ocean Venture Broadcasting*, 3 FCC Rcd 4637 [1988].

¹⁷ *Nan E. Carlisle and Jittendra R. Patel*, 64 RR 2d 1437 [1988].

¹⁸ See 47 C.F.R. §22.115(a)(4), 47 C.F.R. §24.415(j), and 47 C.F.R. §24.815(j).

uncertainty as to the accuracy of geodetic coordinates to be utilized for antenna structure registration. Petitioner requests that the Commission issue a declaratory ruling to resolve this controversy and remove the uncertainty, as follows:

- (A) To within what accuracy (i.e., plus or minus 'x' feet or 'x' seconds), if any, must an antenna site owner specify the geodetic latitude and longitude and elevation of an antenna structure?¹⁹
- (B) If there is a defined accuracy requirement for geodetic latitude and longitude, then should whatever method or device being used to determine the geodetic latitude, longitude and elevation also have an accuracy equal to or superior to the defined accuracy requirement?²⁰

II. ANTENNA STRUCTURES UPON BUILDINGS

14. Perhaps not as major a concern as the issue of accuracy and its potential affect upon the safety of air navigation, but equally a point of confusion to Petitioner, regards the registration of antenna structures upon rooftops of buildings.

¹⁹ In this regard, Petitioner recommends that the Commission require that the geodetic latitude and longitude specified must be accurate to the nearest whole second, and the elevations specified must be accurate to the nearest whole meter.

²⁰ In this regard, Petitioner recommends that the Commission require that whatever methodology or instrumentation that is utilized to determine geodetic latitude and longitude have a measurement capability sufficient to determine the geodetic coordinates (latitude and longitude) accurate to the nearest whole second, and elevation accurate to the nearest whole meter.

Thousands of antenna sites have been created upon the rooftops of tall buildings located across the United States. While the typical rooftop may hold up to a dozen antennas, some hold hundreds of antennas.²¹ It is, therefore, important that the antenna structure registration requirements for building antenna sites be clear and unambiguous.

15. What is unclear in the new antenna structure registration rules is how the rules are to be applied in the case of a building which has multiple antenna structures located upon the roof top. Assume, for a moment, a situation where, on top of a 250 foot tall building, are located four (4) 25 foot tall tower sections, one on each of the four corners of the building rooftop. Now, mounted on top of each one of the tower sections is an antenna. In this scenario, confusion exists as to whether each tower section gets treated as a separate antenna structure, and therefore each tower receives its own registration number; or, as is presently the case with FAA aeronautical studies, whether only the tallest antenna structure upon the building roof top be registered.

16. Further complicating the question about multiple antenna structures upon a single building roof top is the problem that, often times, the latitude and longitude for each of the structures

²¹ The World Trade Center, in New York, New York; and the Sears Tower, in Chicago, Illinois; are two buildings which immediately come to mind that have hundreds of antennas mounted upon their respective rooftops.

will often be the same.²² Accordingly, there may be four separate antenna structures on the roof top, and all four might have the same geodetic latitude and longitude. Concern exists that this may cause problems in the Commission's database when multiple antenna structures are registered each with identical geodetic latitude and longitude.

17. It is also possible, that where multiple antenna structures exist on a building rooftop, each antenna structure may have differing and unique geodetic latitude and longitude. If the Commission were to decide that only the tallest antenna structure upon a building rooftop is to be registered, then a decision must also be made as to what geodetic latitude and longitude should be used for the building (i.e., coordinates of the center of the building, coordinates of the tallest antenna structure, average coordinates of all of the antenna structures, etc.)

17. As has been shown, there is a controversy or material uncertainty as to the procedure for antenna structure registrations on building rooftops where multiple antenna structures exist. Petitioner requests that the Commission issue a declaratory ruling to resolve this controversy and remove the uncertainty, as follows:

²² Obviously, this assumes that the latitude and longitude are rounded to the nearest whole second. If fractional seconds were allowed, this peculiarity probably would not arise.

- (A) Where multiple antenna structures exist on a building rooftop; should each antenna structure be registered as a separate antenna structure, or should only the tallest antenna structure at the building be registered?
- (B) If the Commission declares that only the tallest antenna structure at the building should be registered, then what geodetic coordinates should be specified for the registration (i.e., the structure, center of building, etc.) ?

III. CLARIFICATION AS TO A TOWER

18. Although the rules are quite clear that the "owner" of the "antenna structure" is required to register the antenna structure, the term "owner" can be misleading. For example, in the case of a building, it is typically not the owner of the building that is responsible for the antenna structure registration, but the actual owner of the antenna structure proper.

19. Take the example of an antenna tower that is 190 feet tall and located far away from an airport. Clearly, under the new rules, although the antenna tower is an antenna structure, it does not require registration because the overall height does not exceed 200 feet.

20. Now, assume that a party, other than the owner of the antenna tower proper, installs a 20 foot tall antenna at the top of

the 190 foot tall antenna tower. There is some confusion as to who is responsible for the antenna structure registration: the owner of the antenna tower (which originally did not require registration), or the owner of the antenna which now exceeds the 200 foot limit.

21. As has been shown, there is a controversy or material uncertainty as to the procedure for antenna structure registrations on antenna towers where the original antenna tower did not require registration because it was less than the 200 foot height limit (when far away from an airport). Petitioner requests that the Commission issue a declaratory ruling to resolve this controversy and remove the uncertainty, as follows:

- (A) Where an antenna tower does not exceed the height limit requiring that the antenna tower be registered as an antenna structure by the owner of the antenna tower and is therefore exempt from registration, but later another party installs a surmounting antenna which now exceeds the height limit, who is deemed the "owner" of the antenna structure and, therefore, must file for registration of the antenna structure?
- (B) Where an antenna tower is in excess of 200 feet tall, and the owner of the antenna tower has duly registered the antenna structure, and another party installs a surmounting antenna which increases the overall obstruction height, who is deemed the "owner" and is therefore responsible for registration relative to the

resultant height increase from the surmounting antenna:
the owner of the antenna tower, or the owner of the
surmounting antenna?

IV. CONCLUSION

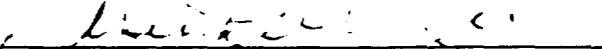
22. As has been shown, there are genuine issues of controversy and uncertain which require resolution and clarification. Teletech applauds the underlying concept behind the new antenna structure registration process as potentially improving the overall safety of air navigation. However, as has been shown herein, due to the numerous controversies and uncertainties, the present course of the process, unless clarified and corrected, will only create a situation which has a negative impact upon air navigation safety, and would be a waste of both the Commission's and the taxpayers' resources.

WHEREFORE, THE FOREGOING PREMISES BEING DULY AND CAREFULLY CONSIDERED, AND FOR GOOD CAUSE HAVING BEEN SHOWN, Petitioner respectfully requests that the Commission render declaratory rulings as set forth *supra*.

Respectfully Submitted,

TELETECH, INC.

Dated: June 3, 1996

By: 
Susan K. Dobronski
Its: President

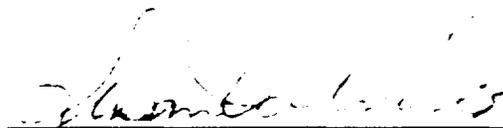
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VERIFICATION

I, Susan Dobronski, do verify that: I am the President of Teletech, Inc., a corporation duly organized and existing pursuant to the laws of the State of Michigan; in that corporate capacity I subscribed to the foregoing *Petition for Declaratory Ruling* filed on behalf of the corporation; the facts stated therein are true and correct to the best of my information, knowledge and belief; this petition is filed in good faith and not for the purpose of delay.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 3rd day of JUNE, 1996.



Susan Dobronski