

the applicable international agreement, if any, must be used instead. The result of a distance calculation under parts 21 and 101 of this chapter must be rounded to the nearest tenth of a kilometer. The method set forth in this paragraph is considered to be sufficiently accurate for distances not exceeding 475 km (295 miles).

(a) Convert the latitudes and longitudes of each reference point from degree-minute-second format to degree-decimal format by dividing minutes by 60 and seconds by 3600, then adding the results to degrees.

$$\text{LATX}_{dd} = DD \div \frac{MM}{60} + \frac{SS}{3600}$$

$$\text{LONX}_{dd} = DDD \div \frac{MM}{60} + \frac{SS}{3600}$$

(b) Calculate the mean geodetic latitude between the two reference points by averaging the two latitudes:

$$\text{ML} = \frac{\text{LAT1}_{dd} + \text{LAT2}_{dd}}{2}$$

(c) Calculate the number of kilometers per degree latitude difference for the mean geodetic latitude calculated in paragraph (b) of this section as follows:

$$\text{KPD sublat} = 111.13209 - 0.56605 \cos 2\text{ML} + 0.00120 \cos 4\text{ML}$$

(d) Calculate the number of kilometers per degree of longitude difference for the mean geodetic latitude calculated in paragraph (b) of this section as follows:

$$\text{KPD sublon} = 111.41513 \cos \text{ML} - 0.09455 \cos 3\text{ML} + 0.00012 \cos 5\text{ML}$$

(e) Calculate the North-South distance in kilometers as follows:

$$\text{NS} = \text{KPD sublat} \times (\text{LAT1 subdd} - \text{LAT2 subdd})$$

(f) Calculate the East-West distance in kilometers as follows:

$$\text{EW} = \text{KPD sublon} \times (\text{LON1 subdd} - \text{LON2 subdd})$$

(g) Calculate the distance between the locations by taking the square root of the sum of the squares of the East-West and North-South distances:

$$\text{DIST} = \sqrt{\text{NS}^2 + \text{EW}^2}$$

(h) Terms used in this section are defined as follows:

(1) LAT1 subdd and LON1 subdd are the coordinates of the first location in degree-decimal format.

(2) LAT2 subdd and LON2 subdd are the coordinates of the second location in degree-decimal format.

(3) ML is the mean geodetic latitude in degree-decimal format.

(4) KPD sublat is the number of kilometers per degree of latitude at a given mean geodetic latitude.

(5) KPD sublon is the number of kilometers per degree of longitude at a given mean geodetic latitude.

(6) NS is the North-South distance in kilometers.

(7) DIST is the distance between the two locations, in kilometers.

5. Section 1.959 is added to subpart F of part 1 to read as follows:

§ 1.959 Computation of average terrain elevation.

Except as otherwise specified in § 90.309(a)(4) of this chapter, average terrain elevation must be calculated by computer using elevations from a 30 second point or better topographic data file. The file must be identified. If a 30 second point data file is used, the elevation data must be processed for intermediate points using interpolation techniques; otherwise, the nearest point may be used. In cases of dispute, average terrain elevation determinations can also be done manually, if the results differ significantly from the computer derived averages.

(a) Radial average terrain elevation is calculated as the average of the elevation along a straight line path from 3 to 16 kilometers (2 and 10 miles) extending radially from the antenna site. If a portion of the radial path extends over foreign territory or water, such portion must not be included in the computation of average elevation unless the radial path again passes over United States land between 16 and 134 kilometers (10 and 83 miles) away from the station. At least 50 evenly spaced data points for each radial should be used in the computation.

(b) Average terrain elevation is the average of the eight radial average terrain elevations (for the eight cardinal radials).

(c) For locations in Dade and Broward Counties, Florida, the method prescribed above may be used or average terrain elevation may be assumed to be 3 meters (10 feet).

§ 1.1102 [Amended]

6. Section 1.1102 is revised by removing paragraph (16)(h).

§ 1.2003 [Amended]

7. Section 1.2003 is revised by removing the phrase "FCC 409 Airborne Mobile Radio Telephone License Application;"

PART 22—PUBLIC MOBILE SERVICES

8. The authority citation for part 22 continues to read as follows:

Authority: 47 U.S.C. 154, 222, 303, 309 and 332.

9. Section 22.1 is amended by revising paragraph (b) to read as follows:

§ 22.1 Basis and purpose.

* * * * *

(b) *Purpose.* The purpose of these rules is to establish the requirements and conditions under which domestic radio stations may be licensed and used in the Public Mobile Services.

10. Section 22.3 is amended by revising paragraph (b) to read as follows:

§ 22.3 Authorization required.

* * * * *

(b) Authority for subscribers to operate mobile or fixed stations in the Public Mobile Services, except for certain stations in the Rural Radiotelephone Service, is included in the authorization held by the licensee providing service to them. Subscribers are not required to apply for, and the FCC does not accept applications from subscribers for, individual mobile or fixed station authorizations in the Public Mobile Services, except that individual authorizations are required to operate rural subscriber stations in the Rural Radiotelephone Service, except as provided in § 22.703.

11. Section 22.7 is revised to read as follows:

§ 22.7 General eligibility.

Any entity, other than those precluded by section 310 of the Communications Act of 1934, as amended, 47 U.S.C. 310, is eligible to hold a license under this part. Applications are granted only if the applicant is legally, financially, technically and otherwise qualified to render the proposed service.

12. Amend § 22.99 as follows:

a. Revise the definitions of Air-Ground Radiotelephone Service, Cellular Radiotelephone Service, Channel, Communications channel, Control channel, Ground station, Offshore Radiotelephone Service, Public Mobile Services, and Rural Radiotelephone Service.

b. Remove the definitions of "Meteor burst propagation mode," "Radio Common Carrier," and "Wireline Common Carrier."

c. Remove the reference to "Air-ground Radiotelephone Service" and add in its place "Air-Ground Radiotelephone Service" wherever it appears.

The revisions read as follows:

§ 22.99 Definitions.

* * * * *

Air-Ground Radiotelephone Service. A radio service in which licensee are authorized to offer and provide radio telecommunications service for hire to subscribers in aircraft.

* * * * *