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BY FIRST CLASS MAIL AND BY E-MAIL MDORTCH@FCC.GOV

March 21, 2011

Marlene H. Dortch, Secretary
 Federal Communications Commission
 445 12th Street, SW
 Washington, DC 20554

Dear Ms. Dortch:

It has recently come to the attention of Hammett & Edison, Inc., Consulting Engineers that Section 1.958 of the FCC Rules (“Distance Computation”) has a significant mathematical error in the formula for calculating distances between two geographic points. The pertinent formula in Section 1.958 is

$$KPD_{lon} = 111.41513\cos(5ML) - 0.09455\cos(3ML) + 0.00012\cos(5ML)$$

whereas it should be

$$KPD_{lon} = 111.41513\cos(ML) - 0.09455\cos(3ML) + 0.00012\cos(5ML)$$

where KPD_{lon} is length of one degree of longitude in kilometers, and ML is the mid-latitude of the two geographic points in question. Note that Section 73.208 of the FCC Rules already cites the correct formulas, and so this correction to the formulas in Section 1.958 will make the formulas in the two sections consistent.

These formulas were derived in the Media Bureau (MB) Docket 80-90 rulemaking and were thus based on the major and minor axes corresponding to the Clarke Ellipsoid of 1866, which in turn was the basis for the 1927 North American Datum (NAD27). All FCC Bureaus and Offices except the Media Bureau have converted to NAD83 coordinates, which are based on the Geodetic Reference system 1980 Ellipsoid. Thus, along with correcting the formula as noted above, it would be appropriate to update Section 1.958 to show the formulas for NAD83:*

$$KPD_{lat} = 111.13292 - 0.55982\cos(2ML) + 0.001175\cos(4ML)$$

and

$$KPD_{lon} = 111.41282\cos(ML) - 0.09350\cos(3ML) + 0.000118\cos(5ML)$$

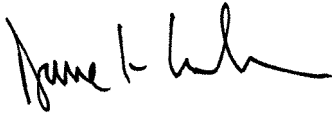
* See Chapter 1.7, *Distance and Bearing Calculations*, of the Tenth Edition of the NAB Engineering Handbook, at page 92.

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Thus, Hammett & Edison proposes that the Commission issue a Notice of Proposed Rulemaking to correct and update Section 1.958 of the FCC rules.

Because MB is still using NAD27 coordinates, we are not proposing a similar update to Section 73.208 of the FCC Rules. We do note, however, that on August 10, 2007, the Society of Broadcast Engineers, Inc. (SBE) petitioned the Commission to have MB convert from NAD27 to NAD83 coordinates, but so far that petition for rulemaking has not had an RM number assigned. We further note that on October 21, 2009, Engineers for the Integrity of Broadcast Auxiliary Services Spectrum (EIBASS) sent the Commission a letter urging action on the SBE petition. Copies of those two submissions are attached, for reference. When MB does convert to NAD83 coordinates, then it would be appropriate at that time to similarly update the Section 73.208 distance calculation formulas.

Sincerely,



Dane E. Ericksen

tm

Enclosures (2)

cc: Mr. Robert D. Weller, OET (w/encls) - BY E-MAIL ROBERT.WELLER@FCC.GOV
Mr. Stephen Buenzow, WTB (w/encls) - BY E-MAIL STEPHEN.BUENZOW@FCC.GOV
Mr. John Wong, MB (w/encls) - BY E-MAIL JOHN.WONG@FCC.GOV

Engineers for the Integrity of Broadcast Auxiliary Services Spectrum

BY FIRST CLASS MAIL

October 21, 2009

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Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

Dear Ms. Dortch:

Engineers for the Integrity of Broadcast Auxiliary Service Spectrum (EIBASS) is sending this query letter regarding an August 10, 2007, Petition for Rulemaking filed by the Society of Broadcast Engineers, Inc. (SBE). To the best of our knowledge, no action has ever been taken in response to that Petition for Rulemaking; that is, no RM number has been assigned, nor has a Notice of Proposed Rulemaking (NPRM) been issued. For reference, a copy of that 2007 SBE filing is attached.

EIBASS believes that the SBE Petition for Rulemaking, proposing that the Media Bureau's Consolidated Data Base System (CDBS) be converted from NAD27 to NAD83, merits Commission action. If the Commission issues an NPRM, or even a public notice assigning an RM number, EIBASS would certainly submit its comments in support.

Sincerely,

/s/ Dane E. Ericksen

/s/ Richard A. Rudman

Dane E. Ericksen

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Enclosure

cc: Mr. Roy Stewart by e-mail: roy.stewart@fcc.gov
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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Converting the CDBS to NAD83) RM No. _____
)

To: The Commission

Petition for Rulemaking

The Society of Broadcast Engineers, Incorporated (SBE), the national association of broadcast engineers and technical communications professionals, with more than 5,000 members world wide, hereby respectfully submits its Petition for Rule Making to convert the Media Bureau's Consolidated Data Base System (CDBS) to North American Datum 1983 (NAD83) geographic coordinates.

I. The CDBS Is Past-Due For Converting to NAD83

1. On March 14, 1988, the Commission released its first public notice regarding the use of NAD83 coordinates, "FCC Interim Procedures for the Specification of Geographic Coordinates," DA 88-316. In that 1988 notice the Commission stated that it would eventually convert to use of NAD83 to maintain accuracy in its records and to maintain consistency with other government agencies and foreign administrations. However, the 1988 Notice instructed that, for the time being, North American Datum 1927 (NAD27) were to continue to be used.

2. In a follow-up September 1, 1992, public notice, "The Federal Communications Commission Continues to Require Applicants to Use Coordinates Based on the North American Datum of 1927," the Commission indicated that NAD27 coordinates would be used during an interim period, while noting that "The FCC will eventually be required to use NAD83 in all of its activities, including licensing and the maintenance of databases."

3. At Paragraph 124 of the October 21, 1998, WT Docket 96-188 Report & Order (R&O), the Commission noted that the Federal Aviation Administration (FAA) had converted to NAD83 coordinates as of October 15, 1992. At Paragraph 125 of the R&O, the Commission stated that it would require NAD83 coordinates in all filings with the Wireless Telecommunications Bureau (WTB) six months after the effective date of the R&O. Since the

SBE Petition for Rulemaking: Converting the CDBS To NAD83

R&O was published in the Federal Register on December 14, 1998, this meant that the R&O became effective on January 13, 1999, and thus that WTB has required use of NAD83 coordinates since July 13, 1999.

4. In light of the fifteen years that have passed since the FAA converted to NAD83, and in light of the eight years that have passed since WTB converted to NAD83, SBE submits that the Media Bureau (MB) is past-due to convert the CDBS to NAD83. SBE further notes that the International Bureau uses only NAD83 coordinates, as does the Office of Engineering & Technology. The continued use of NAD27 coordinates by the Media Bureau causes nothing but confusion (*i.e.*, "Are the provided coordinates NAD27 or NAD83?") to persons filing with both the Media Bureau and the Wireless Telecommunication Bureau (*e.g.*, with the Media Bureau for broadcast stations, but with the Wireless Telecommunications Bureau for Broadcast Auxiliary Service (BAS) stations and antenna structure registrations). To circumvent this confusion, the Media Bureau should embrace NAD83 and convert all existing NAD27 coordinates in the Media Bureau's CDBS.

5. SBE sees no need for the Media Bureau to re-issue all broadcast station licenses with converted NAD83 coordinates; it would be sufficient to simply reflect NAD83 coordinates on all newly-issued authorizations, with the datum clearly indicated.

SBE Petition for Rulemaking: Converting the CDBS To NAD83

II. Summary

6. The Media Bureau should immediately convert the CDBS to NAD83. There is no justification for the continued use of NAD27 coordinates fifteen years after FAA converted to NAD83, and eight years after the Wireless Telecommunications Bureau converted to NAD83. Such conversion will simplify Media Bureau filings and reduce coordinate conversion errors that must now be made in connection with Media Bureau filings.

Respectfully submitted,

Society of Broadcast Engineers, Inc.

/s/ Chriss Scherer, CPBE, CBNT
SBE President

/s/ Dane E. Ericksen, P.E., CSRTE, 8-VSB, CBNT
Chairman, SBE FCC Liaison Committee

/s/ Christopher D. Imlay, Esq.
General Counsel

August 10, 2007

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