Appendix 4. The International Nautical Mile

The following announcement is quoted from the National Bureau of Standards Technical News Bulletin of August 1954.

Adoption of International Nautical Mile

Beginning on July 1, 1954, the National Bureau of Standards will use the International Nautical Mile in lieu of the U.S. Nautical Mile. This decision, replacing the U.S. Nautical Mile of 1,853.248 meters (6,080.20 feet) by the International Nautical Mile of 1,852 meters (6,076.10333 . . . feet), confirms an official agreement between the Secretary of Commerce and the Secretary of Defense to use the International Nautical Mile within their respective departments.

The use of a mile derived from the length of a degree of the earth's meridian is very old. It is believed that the Chaldean astronomers determined the length of such a unit. Miles of this sort have been variously called meridian miles, geographical miles, sea miles, and nautical miles, and they have differed greatly in magnitude, some of the values providing 10, 12, 15, and 60 miles to a degree. The British and the U.S. nautical miles were each derived by taking 60 nautical miles per degree, but the values adopted were not the same. The nautical mile adopted by the British Admiralty equals 6,080 British feet, while the U.S. nautical mile has had the adopted value of 1,853.248 meters, from which the equivalent 6,080.20 U.S. feet has been derived. The British foot is shorter than the U.S. foot by 1 part in 400,000, an amount which is of no importance in the ordinary transactions of everyday life but which is very important in precise measurements.

In 1929 the International Hydrographic Bureau obtained an agreement from a large number of countries to adopt a value of 1,852 meters for the nautical mile, the unit thus defined to be called the International Nautical Mile. However, at the same time Great Britain, the U.S.S.R., and the United States did not accept this value, each country preferring to retain the nautical mile to which it had been accustomed.

Finally, in 1953 an informal group from the Department of Defense and the Department of Commerce considered a proposal for international standardization of abbreviations for the knot and the mile. At this meeting the general situation regarding the nautical mile was discussed, and the belief was expressed that a change from 1,853.248 meters to 1,852 meters would not affect nautical charts, the calibration of navigational instruments, or navigation. Because there seemed to be no sound reason why the International Nautical Mile should not be adopted in this country, the Departments of Commerce and Defense agreed to accept this value as of July 1, 1954, the announcement to be made by the National Bureau of Standards.

Identical directives, in the names of the two departments, have been mutually adopted. The Department of Commerce directive is as follows:

Adoption of International Nautical Mile

I. Purpose

To adopt the International Nautical Mile for use as a standard value within the Department of Commerce.

II. Implementation

After the effective date of this directive, the International Nautical Mile (1,852 meters, 6,076.10333 . . . feet), shall be used within the Department of Commerce as the standard length of the nautical mile.

III. Effective date

This directive is effective 1 July 1954.

It will be noted that in the forgoing announcement one of the equivalents of the international nautical mile is stated as 6,076.10333 . . . feet. The three dots following the last digit indicate a continuing repetition of the digit 3.

By reference to appendix 5, it will be found that the equivalent of the international nautical mile in feet is stated as approximately 6,076.11549 international feet; this latest value represents no change in the length of the nautical mile—1852 meters—but is merely a restatement of the equivalent in terms of the international foot which is shorter than the former United States foot by two parts in a million.

From *Weights and Measures Standards of the United States: A Brief History*, NBS SP 447, March 1976, pp. 29–30.