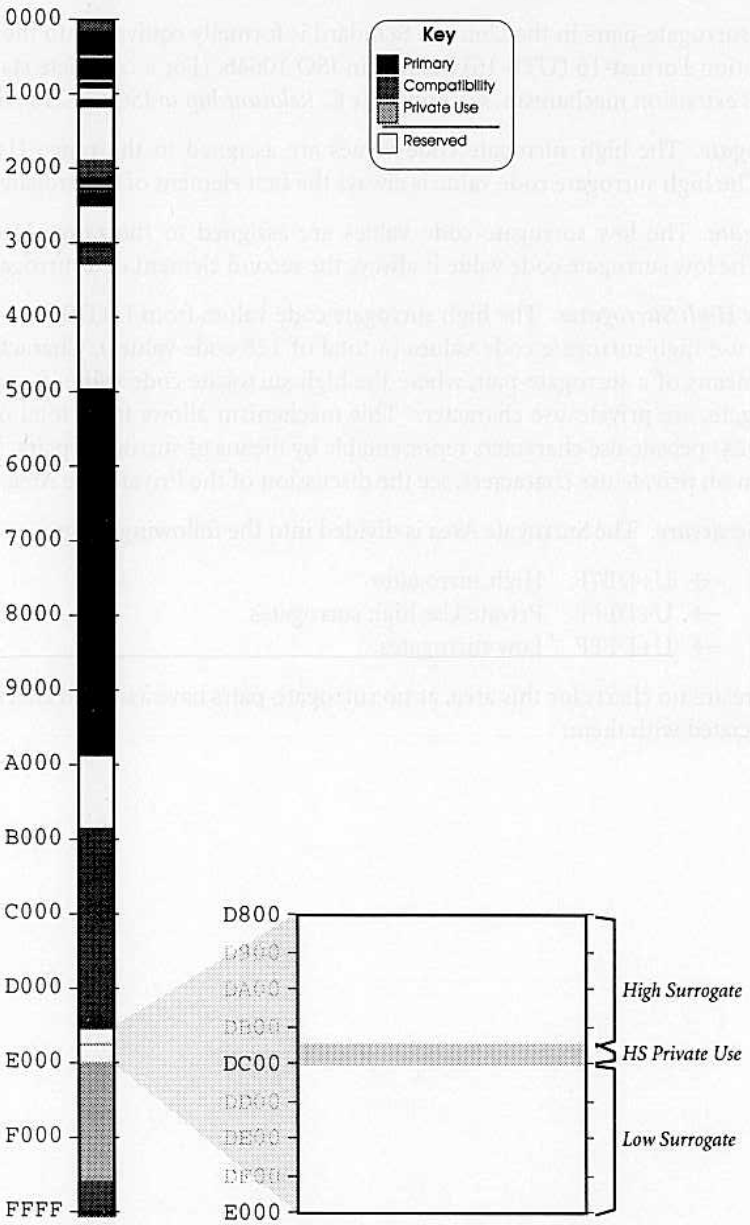
6.6 Surrogates Area

The Surrogates Area of the Unicode Standard provides 2,048 character codes that are used in the surrogate extension method (see Figure 6-31).

Figure 6-31. Surrogates



Surrogates Area: U+D800—U+DFFF

The Surrogates Area consists of 1,024 low-half surrogate code values and 1,024 high-half surrogate code values, which are interpreted in pairs to access over a million code points. Surrogate-pairs are designed to allow representation of rare characters in future extensions of the Unicode Standard. *There are no such characters currently assigned in this version of this standard.* (For the formal definition of a *surrogate-pair* and the role of surrogate-pairs in the Unicode Conformance Clause, see *Section 3.7, Surrogates.*)

The use of surrogate-pairs in the Unicode Standard is formally equivalent to the Universal Transformation Format-16 (UTF-16) defined in ISO 10646. (For a complete statement of the UTF-16 extension mechanism, see *Appendix C, Relationship to ISO/IEC 10646.*)

High Surrogate. The high surrogate code values are assigned to the range U+D800 → U+DBFF. The high surrogate code value is always the first element of a surrogate-pair.

Low Surrogate. The low surrogate code values are assigned to the range U+DC00 → U+DFFF. The low surrogate code value is always the second element of a surrogate-pair.

Private Use High Surrogates. The high surrogate code values from U+DB80 → U+DBFF are private use high surrogate code values (a total of 128 code values). Characters represented by means of a surrogate-pair, where the high surrogate code value is a private use high surrogate, are private use characters. This mechanism allows for a total of 131,072 (=128 × 1024) private use characters representable by means of surrogate-pairs. (For more information on private use characters, see the discussion of the Private Use Area.)

Encoding Structure. The Surrogate Area is divided into the following ranges:

U+D800	→	U+DB7F	High surrogates
U+DB80	→	U+DBFF	Private Use high surrogates
U+DC00	→	U+DFFF	Low surrogates

➥ There are no charts for this area, as no surrogate-pairs have assigned characters associated with them.