Font Families and Scripts

A **font family** is a set of fonts in one typeface design, including different font styles and sizes in that typeface. For example, the Geneva font family may include an outline font in plain style and bitmapped fonts in various point sizes and in italic, bold, shadow, or other styles. (For more information about outline and bitmapped fonts, see the **Font Manager**)

At present a font family is exclusively identified by the 'FOND' resource. This resource groups fonts using a font association table, which contains a word to hold each font's point size, a word for its style, and a word for its associated 'FONT', 'NFNT', or 'sfnt' resource ID. (If the size entry in the table is 0, the resource ID is for an 'sfnt' resource. System 7.0 does not recognize a 'FONT' or 'NFNT' resource with its size set to 0, and your application should not depend on finding these resources.) For font family resources, Apple reserves resource IDs 0 through 1023 and 16000 through 16383. (The font association table is described in the **Font Manager**)

> **Note:** When the Macintosh computer was first introduced, prior to the introduction of the 'FOND' resource, fonts were grouped into font families by storing the family ID in bits 7 through 14 of the font's resource ID. (The font's point size was stored in bits 0 through 6.) The font family was named by including a 'FONT' resource with a point size of 0. Since the font family ID had to fit into 8 bits, the range of numbers available was only 0 through 255; 0 through 127 were reserved for Apple, and 128 through 255 were available for third-party developers. Font families identified using this method are still recognized by the Operating System, but you should not use these IDs or this method of identification.

Scripts are writing systems (such as Roman, Japanese, and Arabic) that are used to represent human languages. Script systems include character sets, fonts, keyboards, and resources that determine text collation and word breaks. Scripts may differ in terms of the direction in which their characters and lines run, the size of the character set used to represent the script, and the context sensitivity of the script.

The Roman script system (used by English and many European languages) has the largest number of font families available. It uses font family IDs between 2 and 16383. The following list shows the defined ID ranges for the font families associated with Roman script systems. (The other resources associated with a script, such as 'itl0', 'itl1', 'itl2', 'itl4', 'KCHR', 'itlk', 'kcs#', 'kcs4', and 'kcs8' resources, have resource IDs in the same range as the 'FOND' IDs for that script. For more information on script systems, resources such as 'itl0' or 'KCHR', and developing software for worldwide markets, see the **Worldwide Software Overview**. Note that the 'INTL' resource is obsolete and you should use the most appropriate currently valid resource, such as 'itl0', 'itl1', or 'itl2'.)

Range	Description
0	System font. This is reserved in any script system. The Operating System may map any font family from any script system to this ID.
1	Application font. This is reserved in any script

	system. The Operating System may map any font family from any script system to this ID.
2 through 255	Font families for the Roman script system that were named using the method described in the **Font Manager**. Do not continue to use these IDs. Note that Apple's system fonts (Chicago, Geneva, New York, and so on) always retain their old font family IDs.
256 through 1023	Reserved numbers. These numbers should be thought of as reserved space that the Operating System can use to resolve past and future font family ID conflicts. Numbers in this range should not be used as a font family's original resource ID.
1024 through 3071	Noncommercial and public domain font families.
3072 through 15999	Commercial font manufacturers' font families.
16000 through 16383	Reserved.

The next list shows the script code and the range of font family IDs assigned to each script system on the Macintosh computer. Non-Roman scripts use font family IDs in the range 16384 through 32767 and in the range -28672 through -24577, and each non-Roman script has a total of 512 font family IDs available. Script codes 33 through 40 are invalid and should not be used.

Script system	Script code	Font family IDs
[System reserved]	Any	0 through 1
Roman	0	2 through 16383
Japanese	1	16384 through 16895
Traditional Chinese	2	16896 through 17407
Korean	3	17408 through 17919
Arabic	4	17920 through 18431
Hebrew	5	18432 through 18943
Greek	6	18944 through 19455
Cyrillic	7	19456 through 19967
Uninterpreted right-to-left symbols	8	19968 through 20479
Devanagari	9	20480 through 20991
Gurmukhi	10	20992 through 21503
Gujarati	11	21504 through 22015
Oriya	12	22016 through 22527
Bengali	13	22528 through 23039
Tamil	14	23040 through 23551
Telugu	15	23552 through 24063
Kannada	16	24064 through 24575
Malayalam	17	24576 through 25087
Sinhalese	18	25088 through 25599
Burmese	19	25600 through 26111

Cambodian	20	26112 through 26623
Thai	21	26624 through 27135
Laotian	22	27136 through 27647
Georgian	23	27648 through 28159
Armenian	24	28160 through 28671
Simplified Chinese	25	28672 through 29183
Tibetan	26	29184 through 29695
Mongolian	27	29696 through 30207
Ethiopian	28	30208 through 30719
Extended Roman for Slavic/Baltic	29	30720 through 31231
Vietnamese	30	31232 through 31743
Extended Arabic (for Sindhi, etc.)	31	31744 through 32255
Uninterpreted left-to-right symbols	32	32256 through 32767
Reserved	41	-28672 through -28161
Reserved	42	-28160 through -27649
Reserved	43	-27648 through -27137
Reserved	44	-27136 through -26625
Reserved	45	-26624 through -26113
Reserved	46	-26112 through -25601
Reserved	47	-25600 through -25089
Reserved	48	-25088 through -24577

For every script, the Operating System always maps the correct system font to ID 0 and the correct application font to ID 1. (In a Roman script system, Chicago is the system font and Geneva is the application font. This is not the case in any non-Roman script system.)

Apple has created a pseudo-script at script code 32, called smUninterp, which provides a range of IDs (32256 through 32767) that you can use to identify fonts that are used as tools in your application. (For example, the MacPaint drawing program uses a special font for its palette symbols.) If the glyphs in such a font should be handled as right-to-left glyphs instead of left-to-right glyphs, use the pseudo-script smRSymbol instead. This pseudo-script, at script code 8, has a font family ID range of 19928 through 20479.