

Why does DS_SHELLFONT = DS_FIXEDSYS | DS_SETFONT?

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You may have noticed that the numerical value of the `DS_SHELLFONT` flag is equal to `DS_FIXEDSYS | DS_SETFONT`.

```
#define DS_SETFONT          0x40L    /* User specified font for Dlg controls */
#define DS_FIXEDSYS        0x0008L
#define DS_SHELLFONT       (DS_SETFONT | DS_FIXEDSYS)
```

Surely that isn't a coincidence.

The value of the `DS_SHELLFONT` flag was chosen so that older operating systems (Windows 95, 98, NT 4) would accept the flag while nevertheless ignoring it. This allowed people to write a single program that got the “Windows 2000” look when running on Windows 2000 and got the “classic” look when running on older systems. (If you make people have to write two versions of their program, one that runs on all systems and one that runs only on the newer system and looks slightly cooler, they will usually not bother writing the second one.)

The `DS_FIXEDSYS` flag met these conditions. Older systems accepted the flag since it was indeed a valid flag, but they also ignored it because the `DS_SETFONT` flag takes precedence.

This is one of those backwards-compatibility exercises: How do you design something so that it is possible to write one program that gets the new features on new systems while at the same time degrading gracefully on old systems?

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