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Attn: Manager of Standard Processing

W614/N295
X3J11/93-041
20 Oct 93

This is a request for interpretation of the American National Standard for the Programming Language C, ANSI/ISO 9899-1990. Please forward to X3J11.

Under section 7.9.3 Files, the standard states on page 126, lines 12-13:

"... Whether a write on a text stream causes the associated file to be truncated beyond that point is implementation-defined."

In subclass 7.9.2, on page 125, line 26 it says, "... Data read in from a text stream will necessarily compare equal to the data that were earlier written out to that stream only if: the data consist only of printable characters and the control characters horizontal tab and new-line; ..."

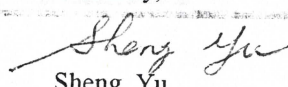
Writing on a text stream might not cause characters to be overwritten exactly one for one, especially on fixed-length record based file systems. If the file is not truncated beyond the point where the data is written, there is no sure way to predict what will be read in after writing in the middle of a text stream because the data might just replace a character, a line, ...etc. Consider the following example:

```
#include <stdio.h>
#include <string.h>
int buf[99];
unsigned int len;
int main(){
    FILE *f = fopen("test.data", "w+");
    fwrite ("abc\ndef\n", 8, 1, f);
    fseek (f, 0, SEEK_SET);
    fwrite ("UWXYZ", 5, 1, f);
    fseek (f, 0, SEEK_SET);
    len = fread (buf, 1, 10, f);
    if (len == 8 && !memcmp (buf, "UWXYZef\n", 8))
        /* Case 1: Ok, acts like binary. */
    else if (len == 5 && !memcmp (buf, "UWXYZ", 5))
        /* Case 2: Ok to truncate after write. */
    else if (len > 5 && !memcmp (buf, "UWXYZ", 5))
        /* Case 3: Is this nonstandard? */
        printf ("len = %u, buf = %s", len, buf);
    else
        printf ("This is obviously nonstandard.");
}
```

Is it conforming to the standard for a compiler that compiles the above program and produces the following output (Case 3)?

len = 9, buf = UWXYZdef

Sincerely,



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