

The New C Standard (Excerpted material)

An Economic and Cultural Commentary

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3.17.1

implementation-defined value

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unspecified value where each implementation documents how the choice is made

Commentary

unspecified value

Implementations are not required to document any unspecified value unless it has been specified as being implementation-defined. The semantic attribute denoted by an implementation-defined value might be applicable during translation (e.g., FLT_EVAL_METHOD), or only during program execution (e.g., the values assigned to argv on program startup).

FLT_EVAL_METHOD
argv values

C90

Although C90 specifies that implementation-defined values occur in some situations, it never formally defines the term.

C++

The C++ Standard follows C90 in not explicitly defining this term.

Coding Guidelines

symbolic name

Implementation-defined values can vary between implementations. In some cases the C Standard defines a symbol (usually a macro name) to have certain properties. The key to using symbolic names is to make use of the property they denote, not the representation used (which includes the particular numerical value, as well as the bit pattern used to represent that value). For instance, a comparison against UCHAR_MAX should not be thought of as a comparison against the value 255 (or whatever its value happens to be), but as a comparison against the maximum value an object having **unsigned char** type can have. In some cases the result of an expression containing a symbolic name can still be considered to have a property. For instance, UCHAR_MAX-3 might be said to represent the symbolic value having the property of being three less than the maximum value of the type **unsigned char**.

Example

```
1 #include <limits.h>
2
3 int int_max_div_10 = INT_MAX / 10; /* 1/10th of the maximum representable int. */
4 int int_max_is_even = INT_MAX & 0x01; /* Testing for a property using representation information. */
```

References