

# **The New C Standard** (Excerpted material)

---

**An Economic and Cultural Commentary**

**Derek M. Jones**

derek@knosof.co.uk

## 3.4

behavior

**behavior**

external appearance or action

41

**Commentary**

Common usage of the word *behavior* would enable it to be applied to all kinds of constructs. By providing this definition, the standard is narrowing down the range of possible uses to a specific meaning.

Rationale

The terms unspecified behavior, undefined behavior, and implementation-defined behavior are used to categorize the result of writing programs whose properties the Standard does not, or cannot, completely describe. The goal of adopting this categorization is to allow a certain variety among implementations which permits quality of implementation to be an active force in the marketplace as well as to allow certain popular extensions, without removing the cachet of conformance to the standard.

External appearances can take many forms. Interactive devices may display pixels, memory-mapped devices may open and close relays, or a processor may not be as responsive (because it is executing a program whose purpose is to consume processor resources). The C Standard sometimes fully specifies the intended behavior and the ordering of actions (although this is not always unique). But in only one case does it discuss the issue of how quickly a behavior occurs.

interactive  
device  
intent**Coding Guidelines**

Developers tend to use the word *behavior* in its general, dictionary sense and include internal changes to the program state. While this usage is not as defined by the C Standard, there is no obvious advantage in trying to change this existing practice.

# References