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C9X Revision Proposal

Title: Boolean as a new type, revision 2
Author: Frank Farance
Author Affiliation: Farance Inc.
Postal Address: 555 Main Street, New York, NY, 10044-0150, USA
E-mail Address: frank@farance.com
Telephone Number: +1 212 486 4700
Fax Number: +1 212 759 1605
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Proposal Category:
__ Editorial change/non-normative contribution
__ Correction
X_ New feature
__ Addition to obsolescent feature list
__ Addition to Future Directions
__ Other (please specify) _____
Area of Standard Affected:
__ Environment
X_ Language
__ Preprocessor
__ Library
__ Macro/typedef/tag name
__ Function
__ Header
Prior Art: C++
Target Audience: C programmers
Related Documents (if any):
Proposal Attached: X_ Yes __ No, but what’s your interest?

This proposal is for adding boolean as a new type, not just a macro for an existing integer type. At the Kona meeting, we approved a Boolean type with standards words to be supplied. The following are the changes to the standard.

In subclause 6.1.1, Keywords, add the keyword "bool".

In subclause 6.1.2.5, Types, add after paragraph #1 the paragraph:

> An object declared as type "bool" is large enough to store the values "true" and "false" and shall have values 1 and 0, respectively.

In subclause 6.1.2.5, Types, change the first sentence in paragraphs #10 and #16 from:

> The type "char", ...

to

The type "bool", the type "char", ...

In subclause 6.2.1, Characters and integers:

Change the title to ‘‘Boolean values, characters, and integers’’.

Change the first sentence from

> A "char"

to

> A "bool", a "char"

Add paragraph #3:

> When a value with integral type is demonted to a "bool", the result is "false" if the value is 0, and "true" otherwise.