# Jeff Vahue

**From:** OMalley, John      PWC <John.OMalley@Altairavionics.aero>
**Sent:** Monday, February 27, 2012 3:47 PM
**To:** Jeff Vahue
**Subject:** RE: Code Review


Hi Jeff,

Here are some ideas:

1. File Format
       a. Copyright Date
       b. Filename is correct in header
       c. File Description is not blank
       d. File Version and date
       e. All sections in the template are in file - in the correct order
       f. Local and Public Sections
            a. All functions that are local are declared and defined with static keyword
            b. All functions that are global are declared with EXPORT in the *.h include file
            c. Local functions are in the local section of the file and global functions are in the global section of the
file
       g. NO TABS in file
       h. lines exceeding 95 characters
       i. Consistent indentation
       j. Magic numbers


2. Function Description Headers
       a.  Formatted correctly
       b. Function name matches the Function name in the header
       c. Description isn't blank
       d. Parameters listed match parameters in the function
       e. Returns listed match function return

3. Functions
       a. Less than 32 character name
       b. less than 200 lines long
       c. Cyclomatic complexity less than 15
       d. Nesting less than 5 levels
       e. No lines over 95 characters
       f. No register usage
       g. Single Entry and Exit Points
       h. All variables initialized before use
       i. No NULL pointers

4. C Excluded Function Checks

5. TBD and TODO detection

6. Function call ignoring return value

7. Naming convention, identifiers use up to 32 characters

8.  Use of defined standard types only (UINT8, UINT16, ...)

9. Switch statements all have a default case.

10. No goto statements

11. No structure bit fields used

12. Variables are declared one per line.

13. Loop Checks, Array Checks

14. sprintf s/b snprintf


*John O'Malley*

John P. O'Malley
Pratt & Whitney Canada
Software Engineer - Embedded Systems
249 Vanderbilt Ave
Norwood, MA 02062

781.680.0093
781.762.2287 Fax
john.omalley@pwc.ca

**From:** Jeff Vahue [mailto:jvahue@knowlogicsoftware.com]
**Sent:** Monday, February 27, 2012 11:42 AM
**To:** John.O'Malley@pwc.ca
**Subject:** Code Review

John,

This Undertand for C API is pretty cool.  It makes rebuilding the SFL a breeze as it has functions for pulling comments out of the code for objects.  Anyway if you get a moment jot down some things you'd like the code review tool to do.

Jeff Vahue
90 Annawon Ave.
Wrentham, MA. 02093
508-404-0067
www.knowlogicsoftware.com