Common Mistakes In Technical Texts
by Cliff Cummings of Sunburst Design - www.sunburst-design.com

1. Testbench / Testbenches

The term "test bench" is wrong. Unlike "red bench" (adjective-noun) to describe a bench that is the color red, there is no such thing as a "test bench" (adjective-noun) or a bench of the type test. In HDL coding we make a "testbench" (noun) interact with a design (noun).

Craftsmen and craftswomen use a "workbench" (noun) not a "work bench" (adjective-noun) or a bench of the work-type. Spell checkers recognize "workbench" but they do not recognize "testbench." This is a shortcoming of current spellcheckers due to the fact that relatively few people even know what a testbench is.

Following the lead of workbenches, the plural of testbench should be testbenches (not testbenchs).

Even Janick Bergeron uses testbench in the title of his first book instead of test bench (and I agree) even though a spell checker does not like testbench (but it does like workbench).

Dictionary Recommendations (Add to your spell-checking dictionary):
testbench
Testbench
testbenches
Testbenches

Auto-Correction Recommendations (add to Tools>AutoCorrect):
from "test bench" to "testbench"
from "Test bench" to "Testbench"
from "testbenchs" to "testbenches"
from "Testbenchs" to "Testbenches"
(Nice abbreviations)
from ttbb to testbench
from Ttbb to Testbench
from ttbbs to testbenches
from Ttbbs to Testbenches

Did you get it wrong??
Global search for "test bench" and make appropriate corrections.

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2. Nonblocking Assignment
Nonblocking assignment is spelled without the hyphen, despite what a spell-checker says. Nonblocking is how it is spelled in the IEEE Verilog Standard and we even cleaned up the Verilog BNF in the 2001 standard to remove stray non_blocking and non-blocking BNF statements. Almost all "non-blocking" references in a book should be changed to "nonblocking."

Dictionary Recommendations (Add to your spell-checking dictionary):
nonblocking
Nonblocking

Auto-Correction Recommendations (add to Tools>AutoCorrect):
from "non-blocking" to "nonblocking"
from "Non-blocking" to "Nonblocking"
from "non blocking" to "nonblocking"
from "Non blocking" to "Nonblocking"
(Nice abbreviations)
from nbaa to nonblocking assignment
from Nbaa to Nonblocking assignment

Did you get it wrong??
Global search for "non-block" or "non block" and make appropriate corrections.

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3. Flip-flop / ~~Flipflop~~
Based on the most common usage of the term from multiple engineering texts and sources, flip-flop is a hyphenated noun (search for "flip-flop," "flipflop" and "flip flop" on the Texas Instruments www.ti.com web site. The term flip-flop appears in the title of multiple IC product description data sheets. The other terms do not - also look it up in most engineering texts)

Dictionary Recommendations (Add to your spell-checking dictionary): (none)

Auto-Correction Recommendations (add to Tools>AutoCorrect):
from "flip flop" to "flip-flop"
from "flipflop" to "flip-flop"
(Nice abbreviations)
from ff to flip-flop
from Ff to Flip-flop

Did you get it wrong??
Global search for "flipflop" or "flip flop" and make appropriate corrections.

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4. Multiplexer / ~~Multiplexor~~

Janick Bergeron uses a mixture of multiplexor and multiplexer in his first testbench book. Even though both are technically correct, one or the other should be used consistently throughout the book and multiplexer is by far the more common usage (search for both on the Nortel.com web site, a maker of network multiplexer products - Nortel even has multiple products that include "Multiplexer" in the product names - "Wavelength Division Multiplexer (WDM)") (also look it up in most engineering texts)

Dictionary Recommendations (Add to your spell-checking dictionary):
multiplexer
Multiplexer

Auto-Correction Recommendations (add to Tools>AutoCorrect):
from "multiplexor" to "multiplexer"
from "Multiplexor" to "Multiplexer"

Did you get it wrong??
Global search for "multiplexor" and make appropriate corrections.

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5. Combinational / ~~Combinatorial~~

Based on the most common usage of the term from multiple engineering texts and sources, combinational appears to be preferred over combinatorial, although both can be commonly found. (search for "combinational" and "combinatorial" on the Texas Instruments www.ti.com web site - the term combinational appears many more times than combinatorial, although both can be found).

Dictionary Recommendations (Add to your spell-checking dictionary): (none)

Auto-Correction Recommendations (add to Tools>AutoCorrect):
from "combinatorial" to "combinational"

Did you get it wrong??
Global search for "combinatorial" and make appropriate corrections.

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6. "a" / "an" Usage
A very common English-usage mistake is the incorrect usage of "a" instead of "an" in a sentence. Most Americans mistakenly believe that "a" is used in front of a word starting with a consonant and that "an" is used in front of words that start with a vowel. This is wrong. "an" is used in front of any word that starts with a vowel-sound, such as "an HDL" (pronounced: "an aach-dee-ell"). Try visiting the following website for a full explanation: www.wordinfo.info/words/index/info/view_unit/3431 (or if this link is broken, Google search for "a, an usage")

Recommendation - get it right!

Revision Changes

This section includes descriptions of revisions that have taken place since the original paper was published.

An updated version of this paper can be downloaded from the web site:
www.sunburst-design.com/papers

Revision 1.1 (March 2009) - What Changed?

In March 2009, a colleague, Saurabh Mathur, identified an error in the "a" / "an" Usage web page reference. A subsequent check of the web reference showed that the link was no longer valid. A substitute link and Google-search-term recommendation were added to this section

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An updated version of this paper can be downloaded from the web site: www.sunburst-design.com/papers
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