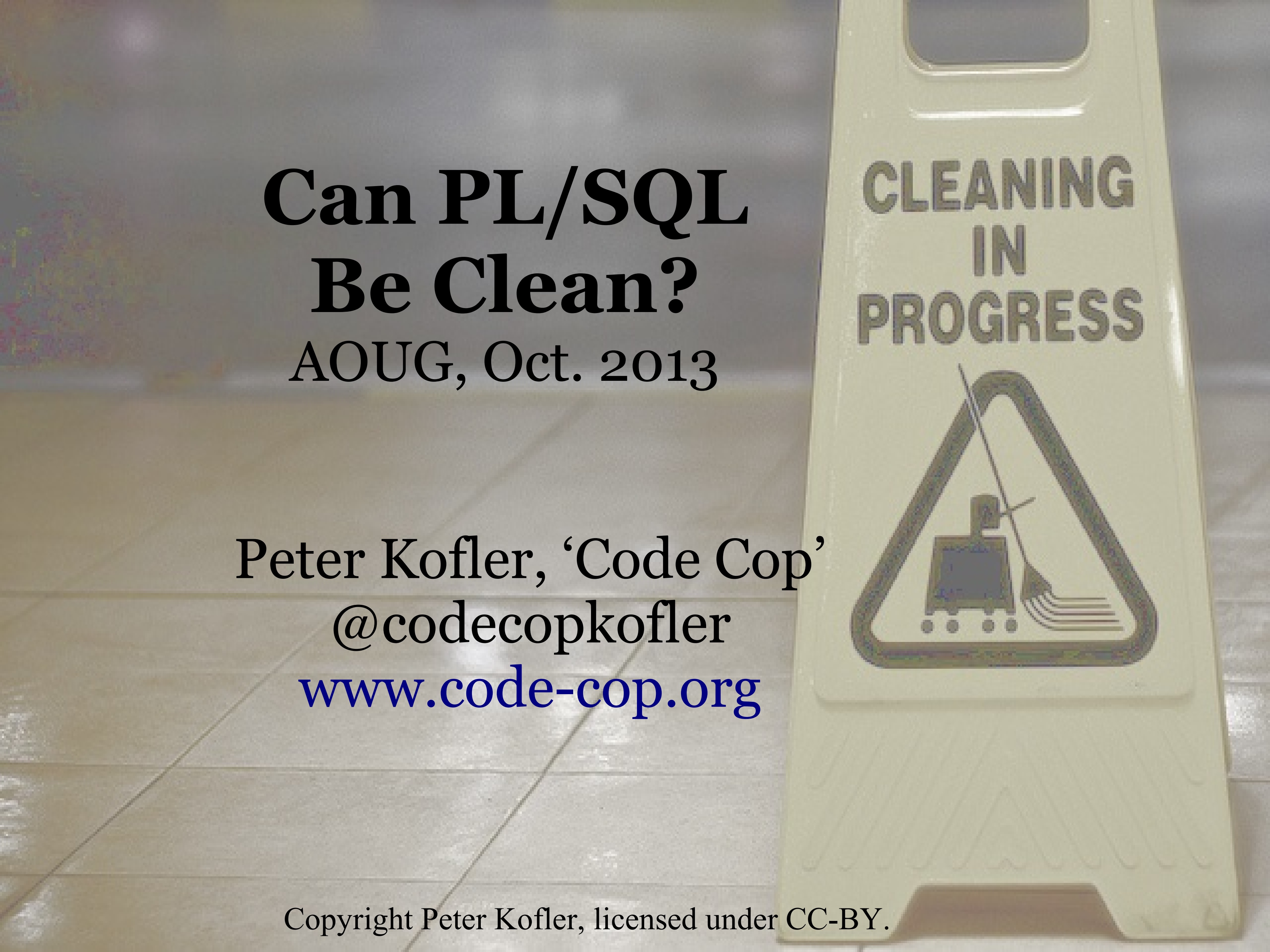
# Can PL/SQL Be Clean?

AOUG, Oct. 2013



Peter Kofler, ‘Code Cop’
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# Peter Kofler

- Ph.D. (Appl. Math.)
- Software Developer
  for 14 years
- “fanatic about code quality”
- Pair Programming #CodeCopTour

# Agenda

- Define Clean Code
- Define PL/SQL
- Apply Clean Code to PL/SQL
- Examples
- Discussion

“Craftsmanship Over Crap“

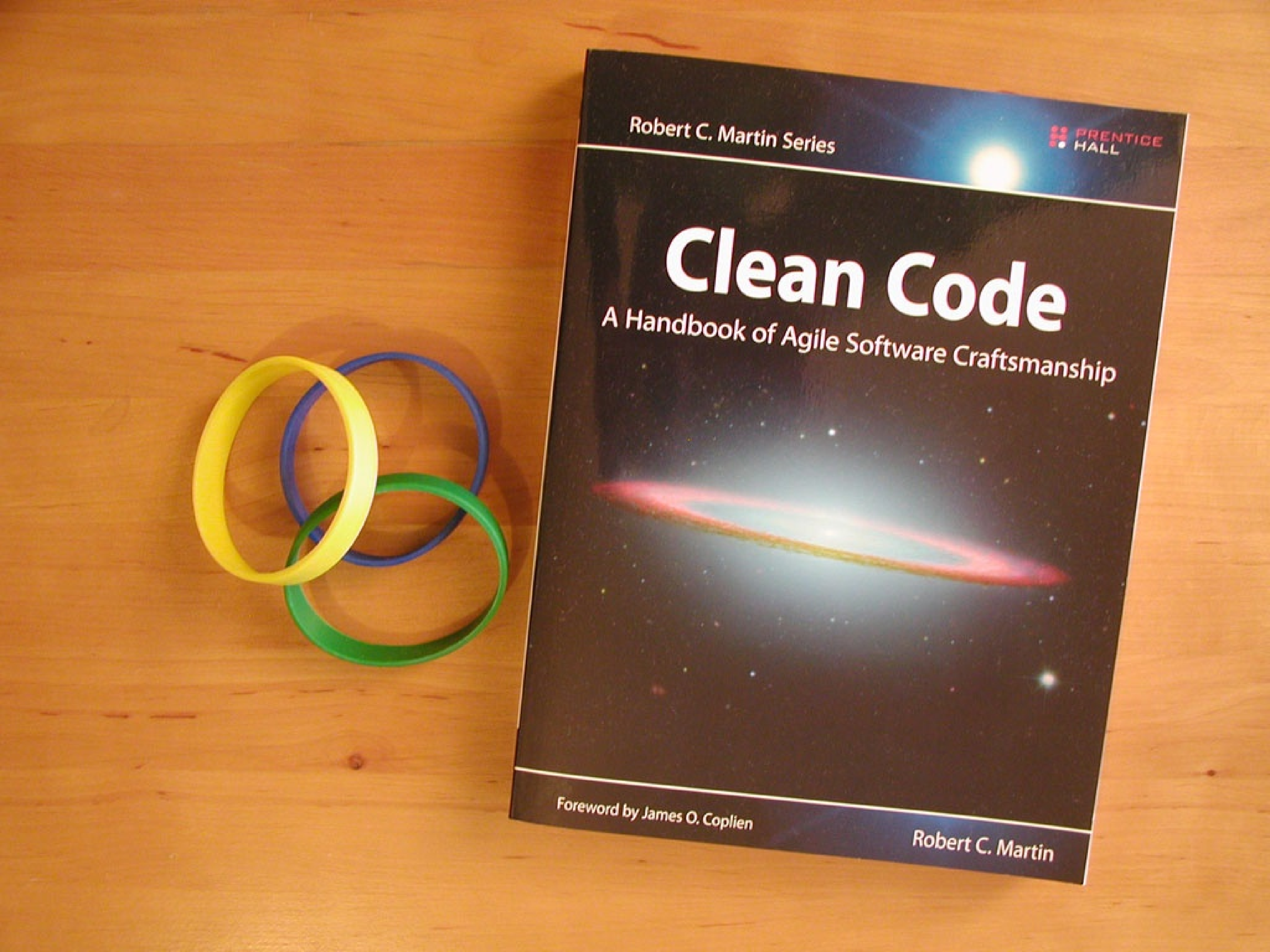
(Robert C. Martin)

“Clean code looks like it was written by someone who cares.”

(Michael Feathers)

Rule 1)
Written by
someone who
cares.

# What is Clean Code?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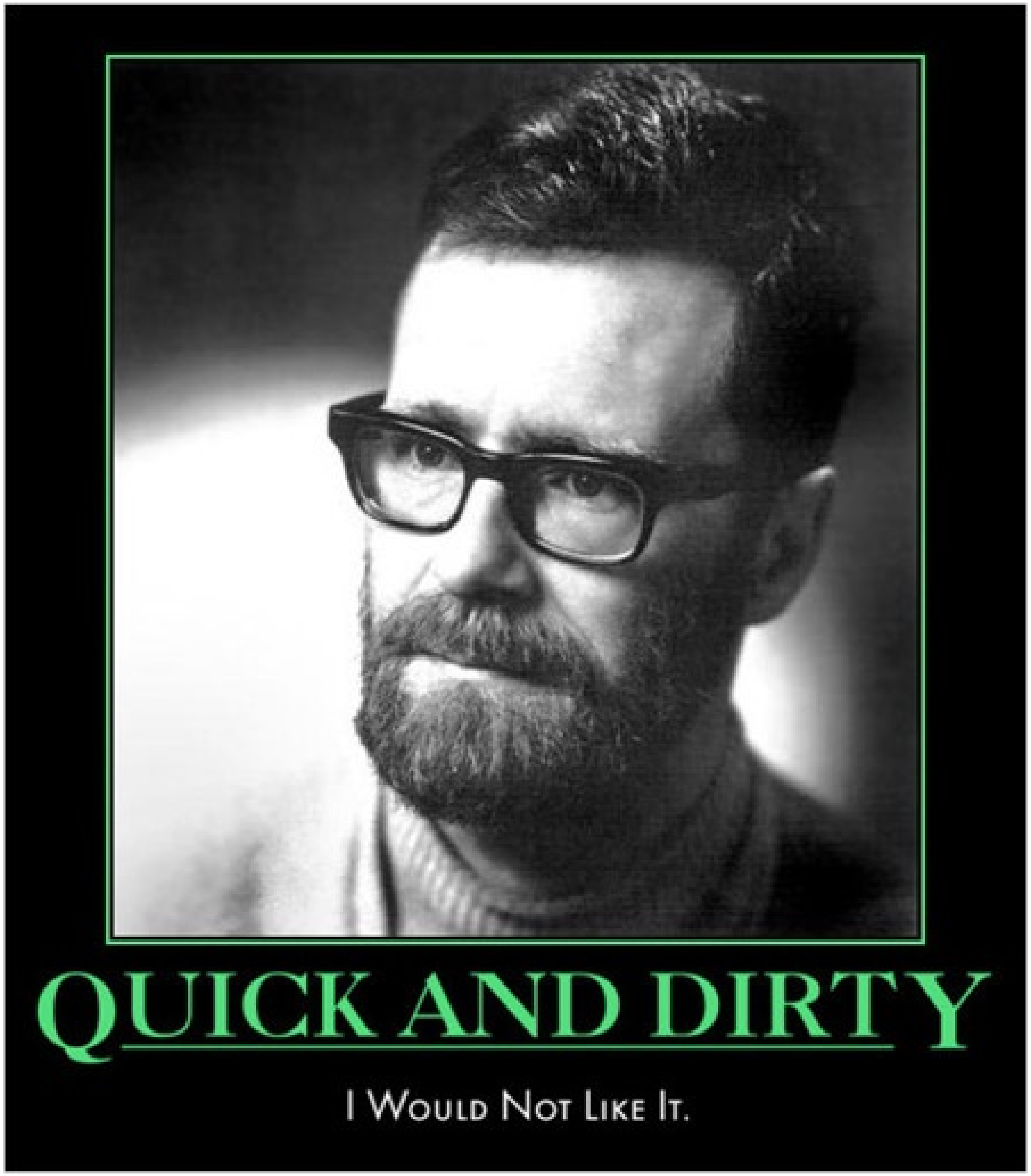
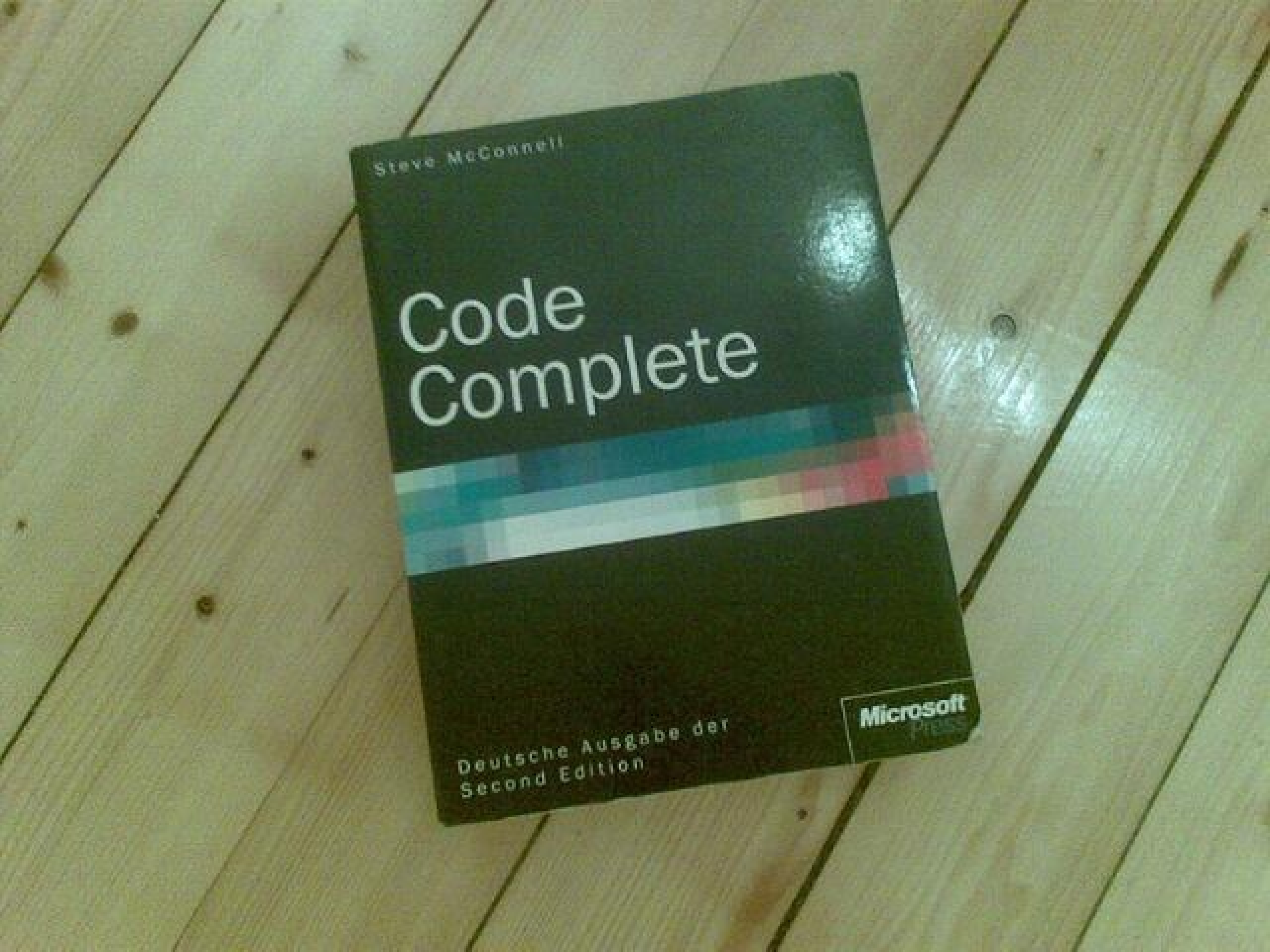
# Clean Code is Not New

- Clean Coder, 2011
- Clean Code, 2008
- Implementation Patten, 2007
- Agile Software Development, 2002
- The Pragmatic Programmer, 1999
- Refactoring, 1999
- Code Complete 1st Ed, **1993 (!)**


QUICK AND DIRTY
I Would Not Like It.


Steve McConnell
Code Complete
Deutsche Ausgabe der
Second Edition
Microsoft Press

“Write Programs for People First, Computers Second.”

(Steve McConnell)

# Rule 2)
# Written for
# People First.

So how would

**You**

like the code to be?

(besides working correctly)

Code which does not make me want to kill the author.

*http://programmers.stackexchange.com/a/13594/15057*

# Easy and Simple!

- Easy to read.
- Easy to follow.
- Easy to understand.
- Easy to modify.
- Easy to test.
- Easy …

*http://stackoverflow.com/a/954582/104143*

# Procedural Language/ Structured Query Language

# Should you write PL/SQL with care?

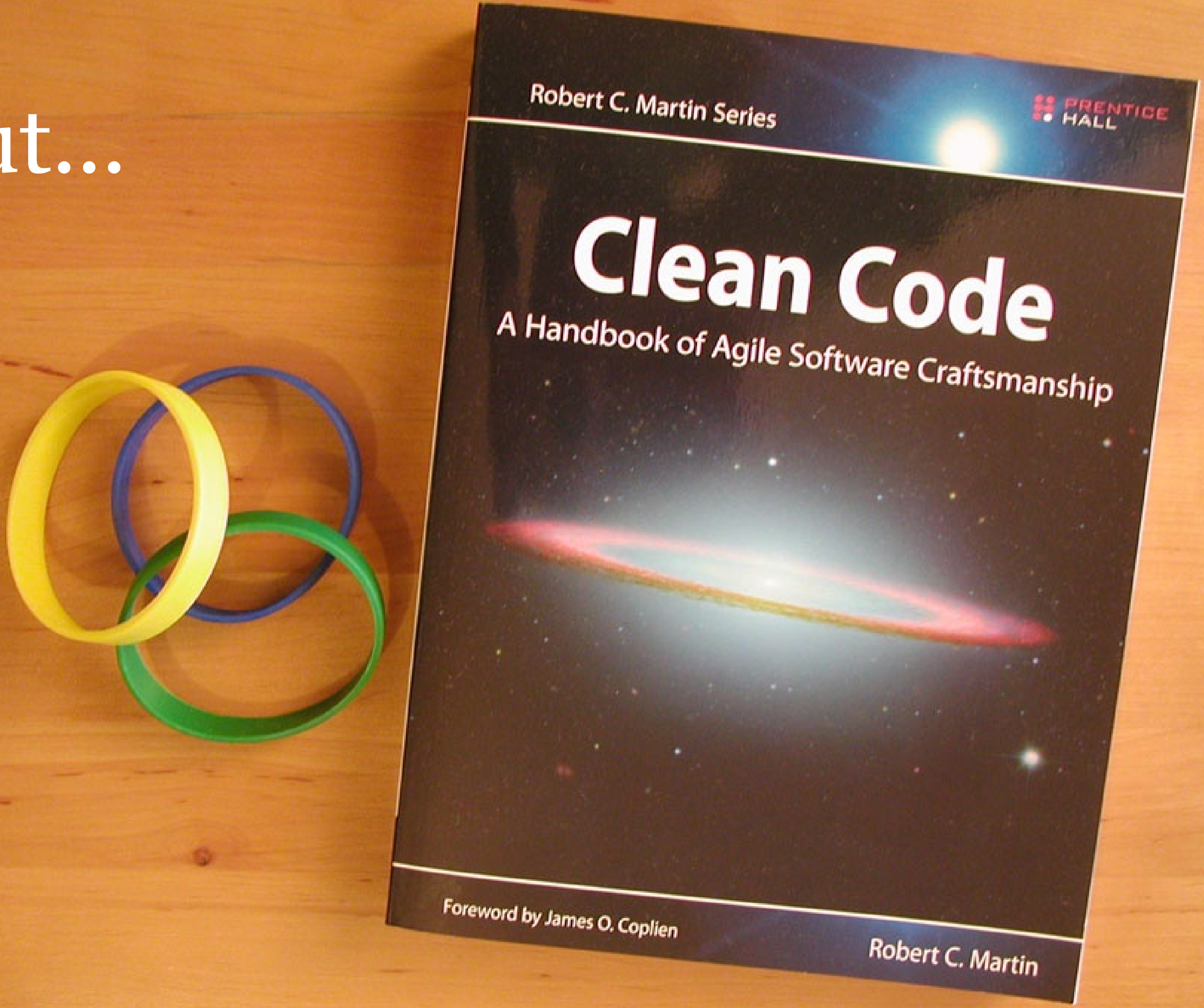
# Should you write PL/SQL for people?

Tadaaa!

Clean PL/SQL looks like it was written by someone who cares.

# Write PL/SQL for People First, Databases Second.

# But…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# PL/SQL is not Java

- Clean Code targets “modern” languages
  - Java, C#
  - Ruby, Python
  - maybe C++
- Clean Code is about
  - Object Orientation
  - Test Driven Development

# Do these guidelines apply to PL/SQL?

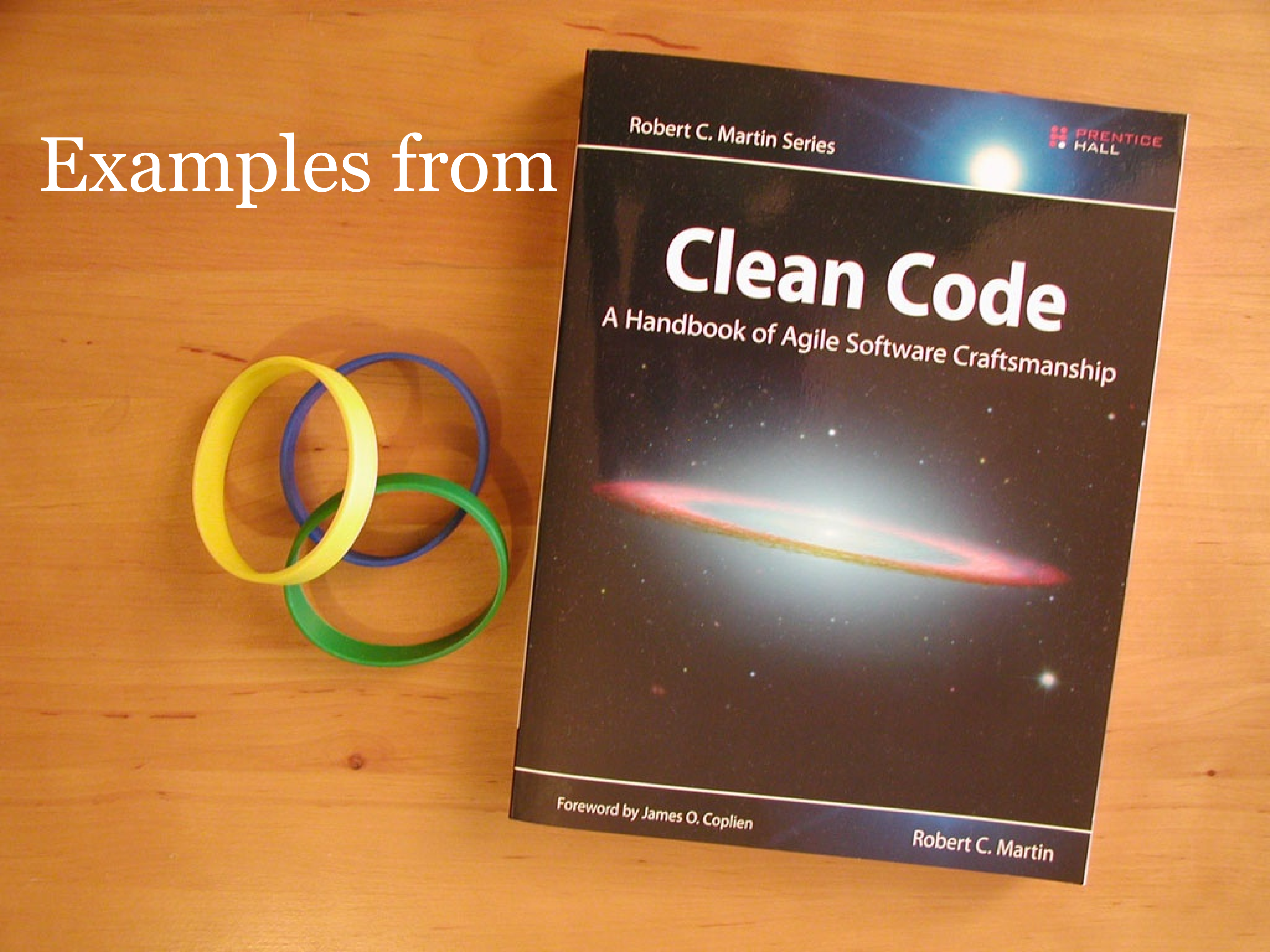
# PL/SQL is...

- compiled
- imperative/procedural with modules
  - function/procedure/package
- structured
  - if/loop/continue/exit
  - with exceptions
- static typed with strong type safety
- kind of object-orientated (version 8)

*http://en.wikipedia.org/wiki/PL/SQL*

Sounds much like Java to me ;-)

# Examples from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# Meaningful Names

- Names should reveal intent.
- Use pronounceable names.
- Use Problem Domain Names.

e.g. *http://www.zero1design.com/2011/10/31/cleaner-code-in-t-sql-part-1-%E2%80%93-naming-stored-procs-views/*

*http://theprofoundprogrammer.com/post/26561881517/text-single-letter-variables-who-the-fuck-do*

# Other Chapters

- Formatting ☑
- Comments ☑
- Functions ☑
- Unit Testing ☑

$^{1}/_{3}$ of “Clean Code” applies **directly**

# Single Responsibility Principle

- „SRP“
- Do one thing.
- One reason for a function to change.
- One level of abstraction per function.
- Maybe applies to packages as well.

# Other Object Oriented Stuff?

- Encapsulation ☑
- Coupling (between packages) ☑
- Cohesion ☑
- Cyclomatic Complexity ☑

# ½ of “Clean Code” applies (in some way)

# Conclusion

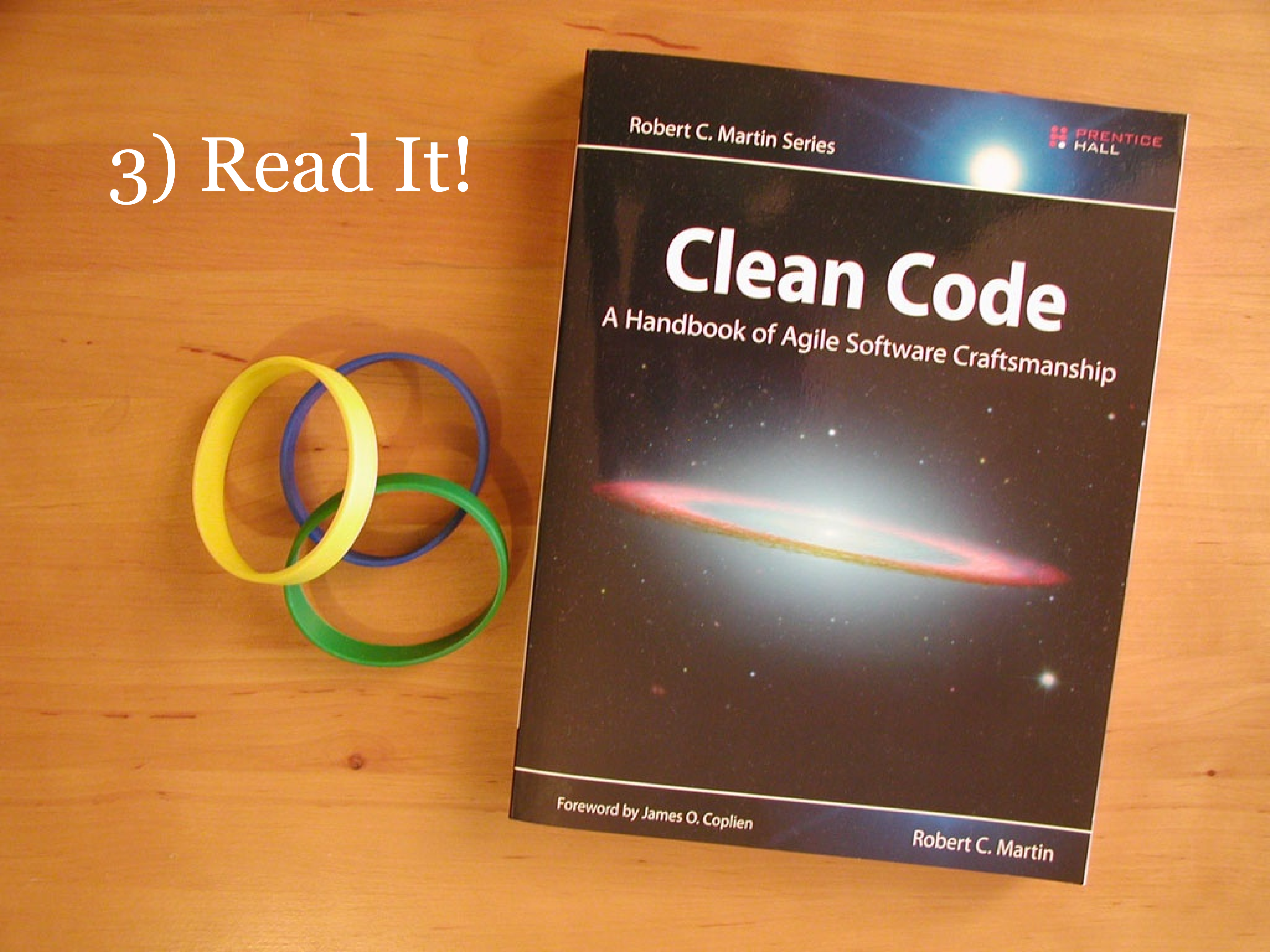
1)

Clean code always looks like it was written by someone who cares.

# 2)
# Clean Code Applies to PL/SQL

(at least to a certain extend)

# 3) Read It!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