What's a 'Peer'? Are they really best to review my work?

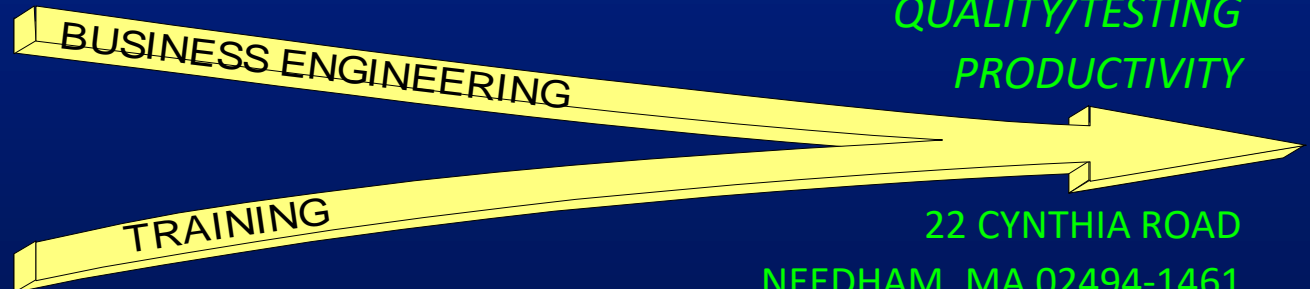*Robin F. Goldsmith, JD*

GO PRO MANAGEMENT, INC.

SYSTEM ACQUISITION & DEVELOPMENT
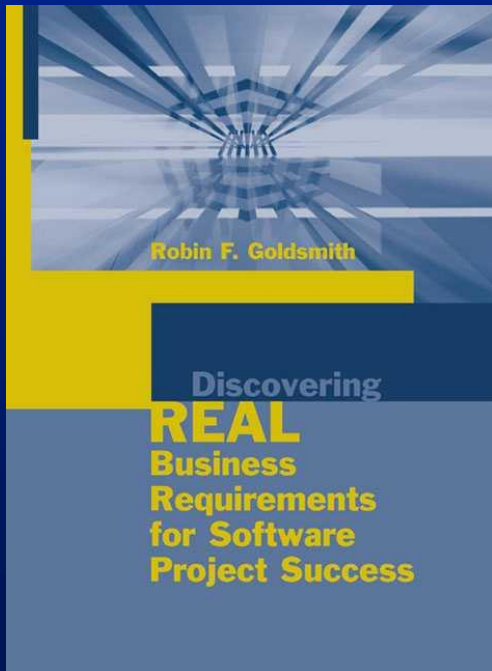
QUALITY/TESTING

PRODUCTIVITY

BUSINESS ENGINEERING

TRAINING

Discovering REAL Business Requirements for Software Project Success

Robin F. Goldsmith

22 CYNTHIA ROAD
NEEDHAM, MA 02494-1461
INFO@GOPROMANAGEMENT.COM
WWW.GOPROMANAGEMENT.COM
(781) 444-5753

True Shift-Left Secrets to Truly Quicker, Cheaper, but Better Software

Thur-Fri April 11-12, 2024 10:00 – 6:00 pm ET

Avoid Agile User Story Conversation Traps

Thur. April 25, 2024 10:00-6:00 pm ET

https://www.softwareexcellenceacademy.com/Live-Courses

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What does "peer" mean to you?

Quickly write <u>in the Q&A.</u>

Does it matter to you? Why?
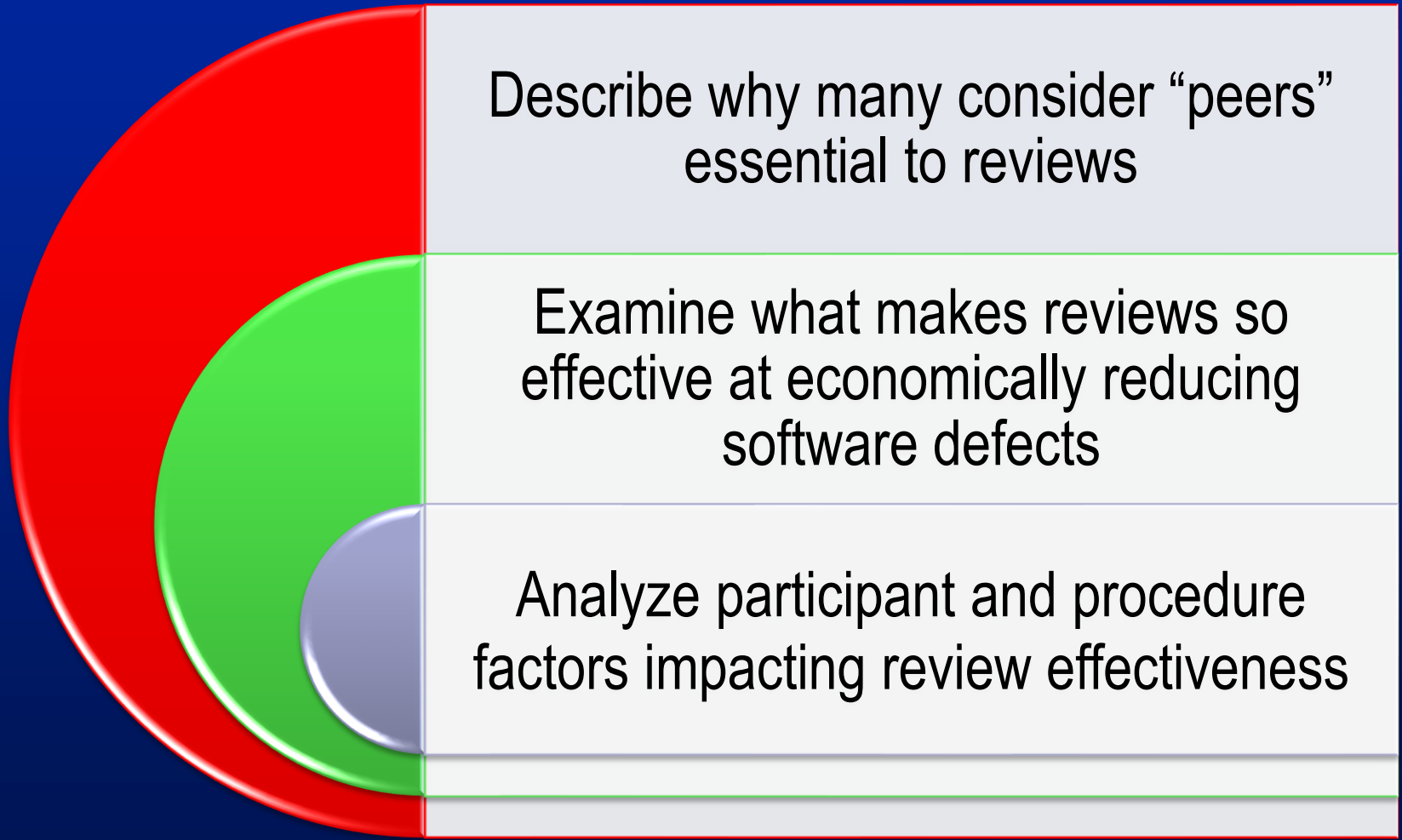
Do you use peer reviews?

Quickly write <u>in the Q&A.</u>

If so, what are their strengths and weaknesses for you?

What's a 'Peer'? Are they really best to review my work?

Your Issues and Objectives

Quickly write in the Q&A.

What's a 'Peer'? Are they really best to review my work?

Objectives

Describe why many consider "peers" essential to reviews

Examine what makes reviews so effective at economically reducing software defects

Analyze participant and procedure factors impacting review effectiveness

What's a 'Peer'? Are they really best to review my work?

Peer 1

❖ one that is of equal standing with another : **EQUAL**

❖ The band mates welcomed the new member as a *peer*.

❖ *especially* : one belonging to the same societal group especially based on age, grade, or status

❖ teenagers spending time with their *peers*

What's a 'Peer'? Are they really best to review my work?

Jury of Your Peers

https://pixabay.com/illustrations/court-lawyer-evidence-jury-legal-5665992/

Peer 2

❖ **a**: a member of one of the five ranks (duke, marquess, earl, viscount, or baron) of the British peerage

❖ **b**: **NOBLE SENSE 1**

❖ *Peers* and commoners alike were shown the same courtesy.

Peerage

https://pixabay.com/illustrations/ai-generated-sheep-animal-mammal-8608186/

https://pixabay.com/illustrations/ai-generated-dress-outfit-7971097/
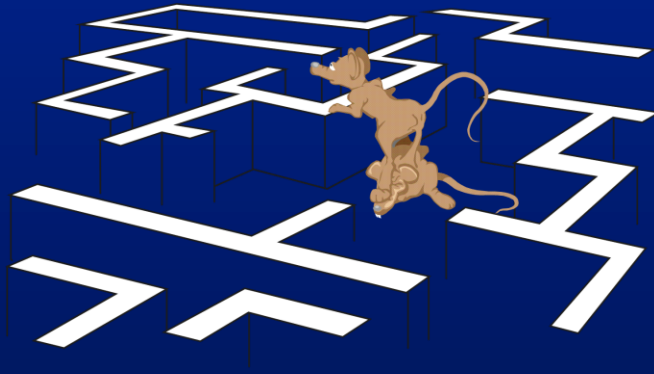
What's a 'Peer'? Are they really best to review my work?

Inspections and Walkthroughs Are Both Group Technical Reviews

**My definitions—
Different from others'
But I think more useful**

Inspections often also use walkthrough step-by-step

➢ Walkthroughs are step-by-step simulations

  – Usually at reading out loud pace

  – Often informal (weaker)

➢ Inspections are guided by a common errors list

  – Often share findings from individual preparation at silent reading pace (so cover more)

  – Usually formal (stronger)

Related, Non-Group, Reviews

- Supervisory review, often in presence of author

- Technical review, usually done independently and then reported back to author or supervisor

- Buddy checking, typically directed toward specific concerns (includes pair programming)

What's a 'Peer'? Are they really best to review my work?

Informal Technical Reviews

- Reviewers often picked at random

- May be little advance preparation

- Focus often is on familiarization, not on finding errors

- Easy to get sidetracked and overextended

- Findings may be communicated only orally

- Reviewers not held accountable for quality of their review

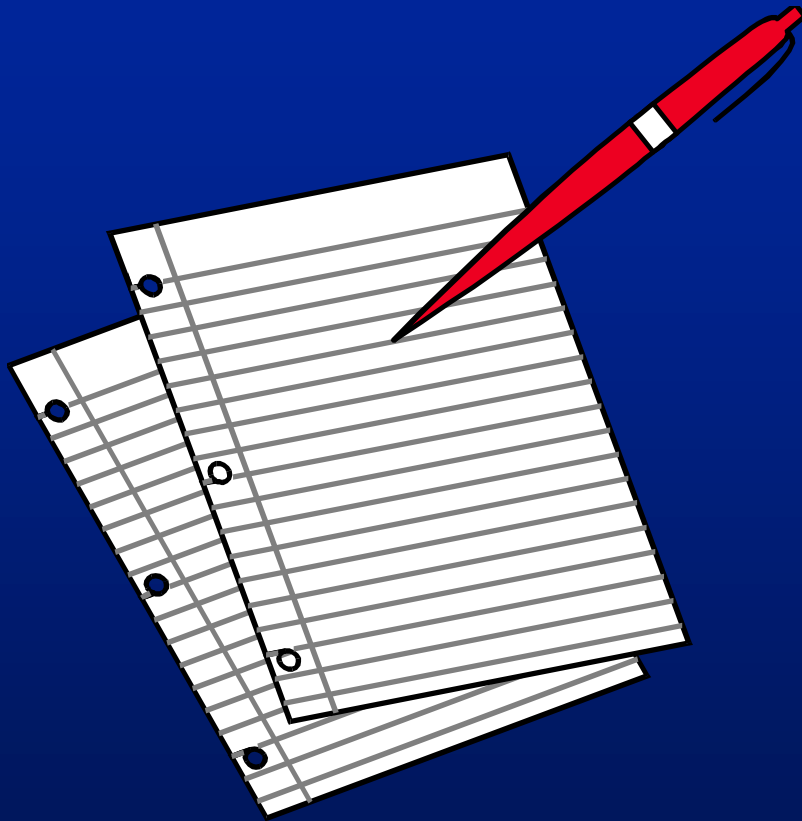- Review results may have no consequence

Walkthroughs often (but not always) are done informally

Product's Author Usually Leads Informal Reviews

❑ Tend to skip key parts

   – what they didn't know

   – where they had trouble

❑ Product doesn't have to stand on own

❑ Ending the review can become top priority

❑ Often more heat than light
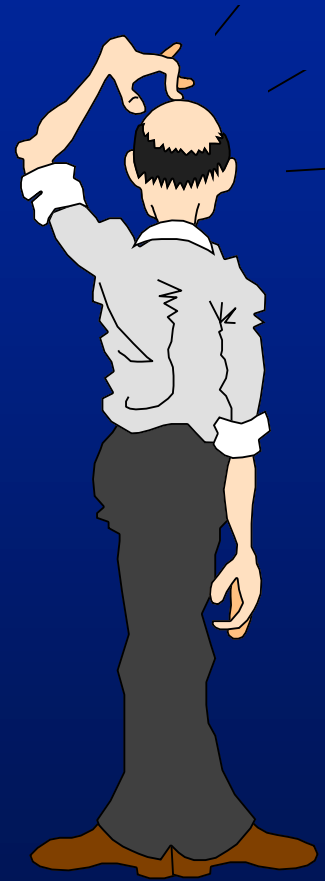
Formal Review Procedures

❖ Conscious team selection

❖ Reviewers accountable

❖ Manage process

– preparation, participation

– product not person

– find errors, don't resolve

– limit to 2 hours

– roles, reports, "teeth"

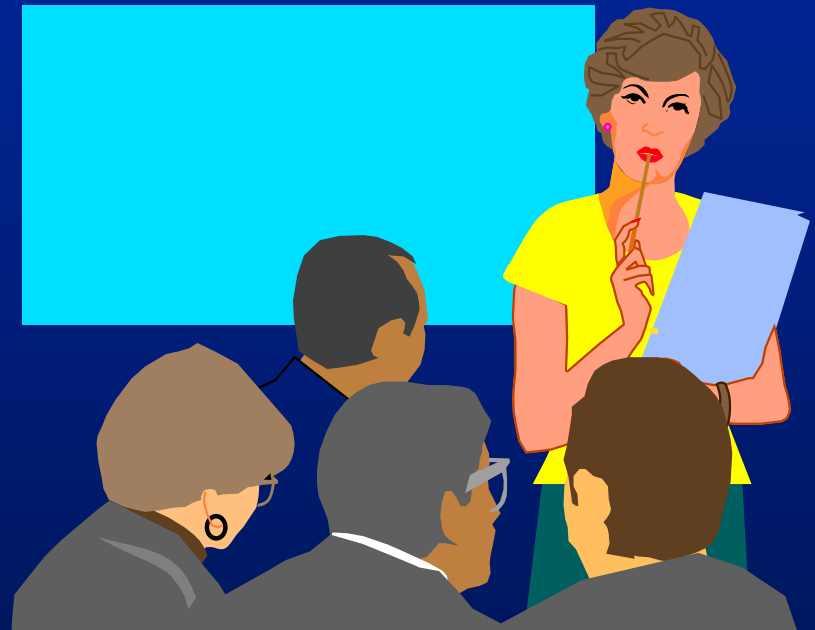*Inspections usually are done formally (but maybe not)*

Review Team Roles

- ❖ Moderator
- ❖ Recorder/scribe
- ❖ Reader/leader
- ❖ Other reviewers
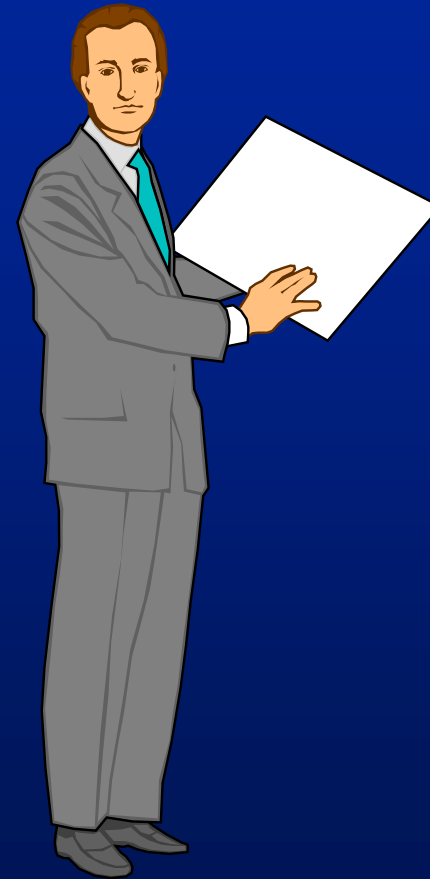
Everyone Is a Reviewer

Author Often Not Present

*Author's Supervisor(s) Never Present*

Summary Report to Management

❖ Product reviewed

❖ Review participants

❖ Group decision (***most severe***)

– accept product

– minor revision, no re-review

– revision, limited re-review

– revision, team re-review

What's a 'Peer'? Are they really best to review my work?

Issues (Detail) Report

❖ Goes only to author and reviewers

❖ Major points
- – avoid nitpicking
- – mainly negatives
- – issues not solutions

❖ Common source of metrics
- – visibility at unit test phase
- – categorized for analysis

What's a 'Peer'? Are they really best to review my work?
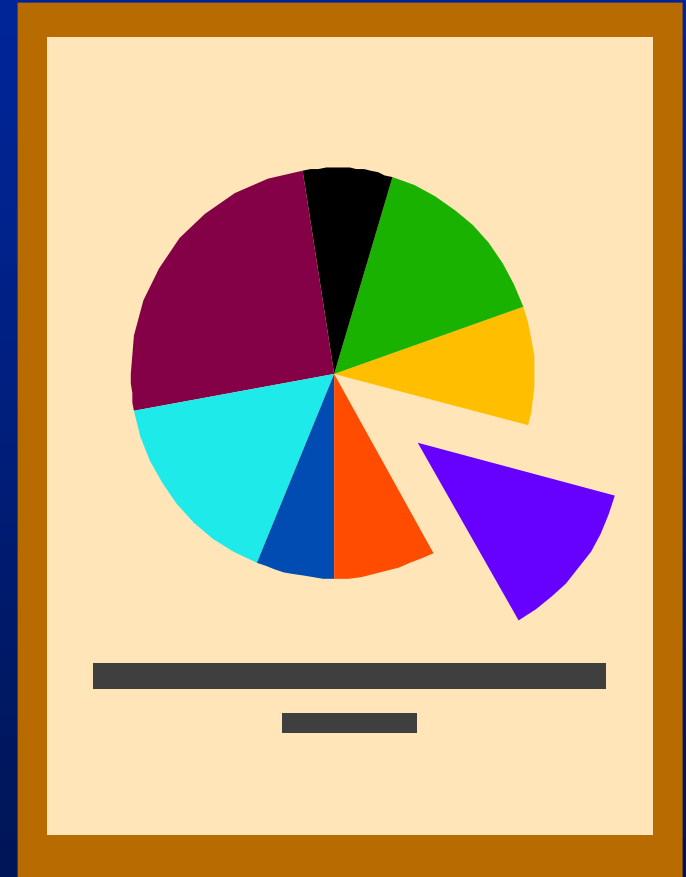
Strengthening the Review Process
Truly Shift-Left

⭐ Predefine topics & specifics to examine

- Organization's prescribed format (e.g., IEEE)
- Presumed functions and common functions

➢ Proactive Testing™ 21 ways to evaluate requirements:

- Formats (generally all that is done, least knowledge/value)
- Finding overlooked requirements (most value)
- Accuracy and completeness (most knowledge)

➢ Proactive Testing™ 15 ways to review designs

- Suitability and adequacy

Which Takes Longer?

Testing
Debugging ✓   Finding ✓
                Fixing

Reviews find in one pass, no start-stop:

✘ Several at a time, not onesy-twosy

☐ Selective perception

▼ Issues list prompts to see problems

▲ And be more acute

▨ Find omissions

What's a 'Peer'? Are they really best to review my work?

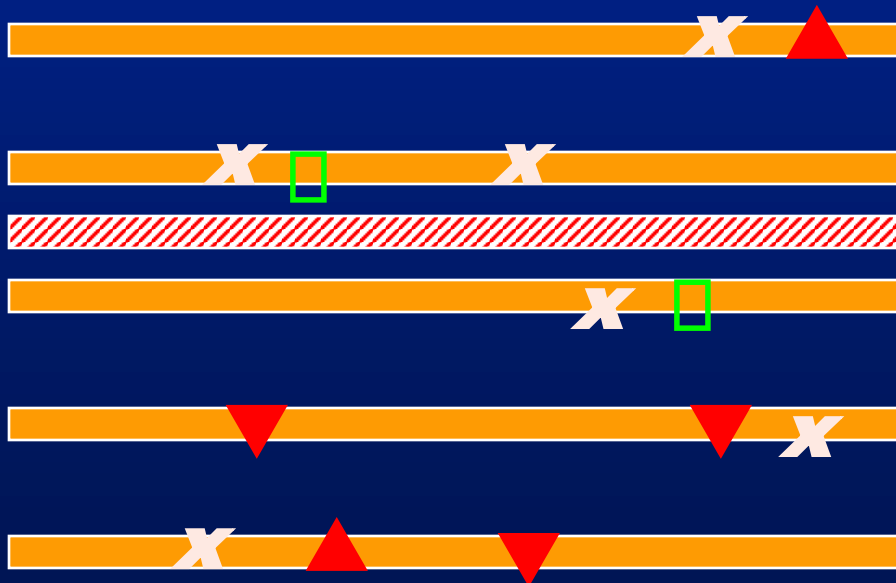# *Which Takes Longer?*

Testing
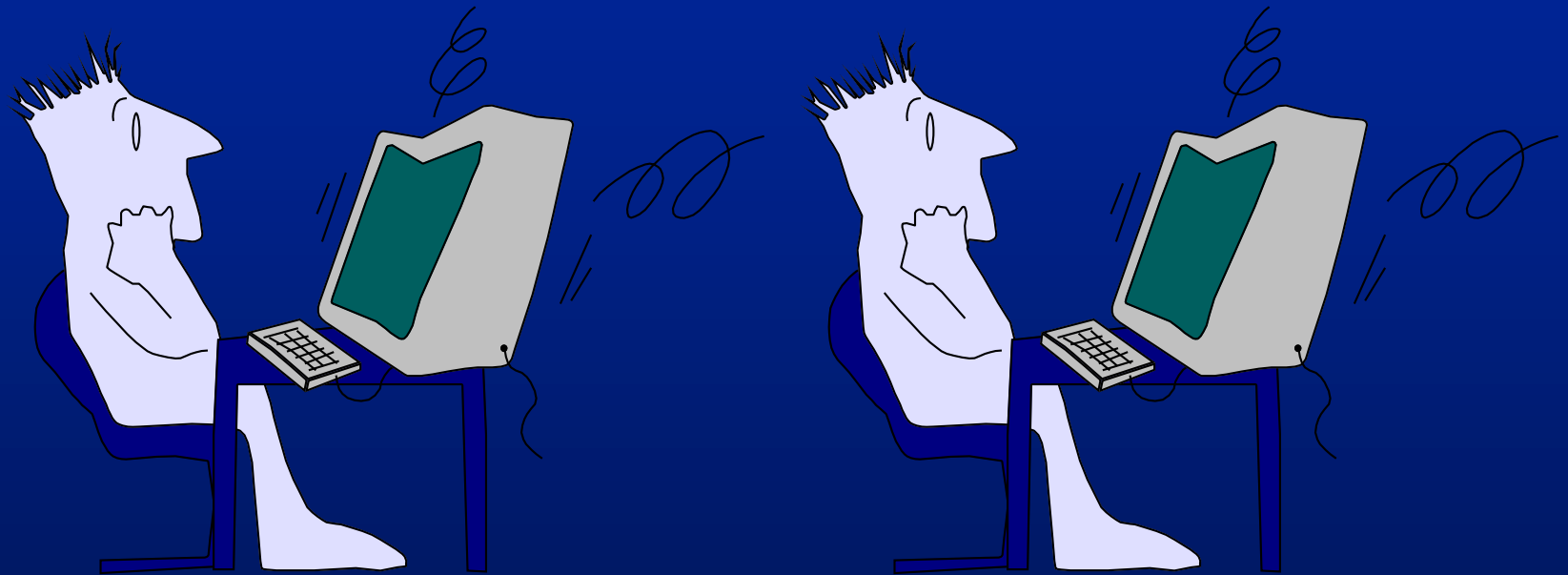Debugging ✓

Finding ✓
Fixing

How long to find?

Reviews find in one pass, no start-stop:

✗ Several at a time, not onesy-twosy

▢ Selective perception

▼ Issues list prompts to see problems

▲ And be more acute

▨ Find omissions

What's a 'Peer'? Are they really best to review my work?

What's that really mean?   *In Q & A*

Generally Those Who Do Same Kind of Work as Author Being Reviewed
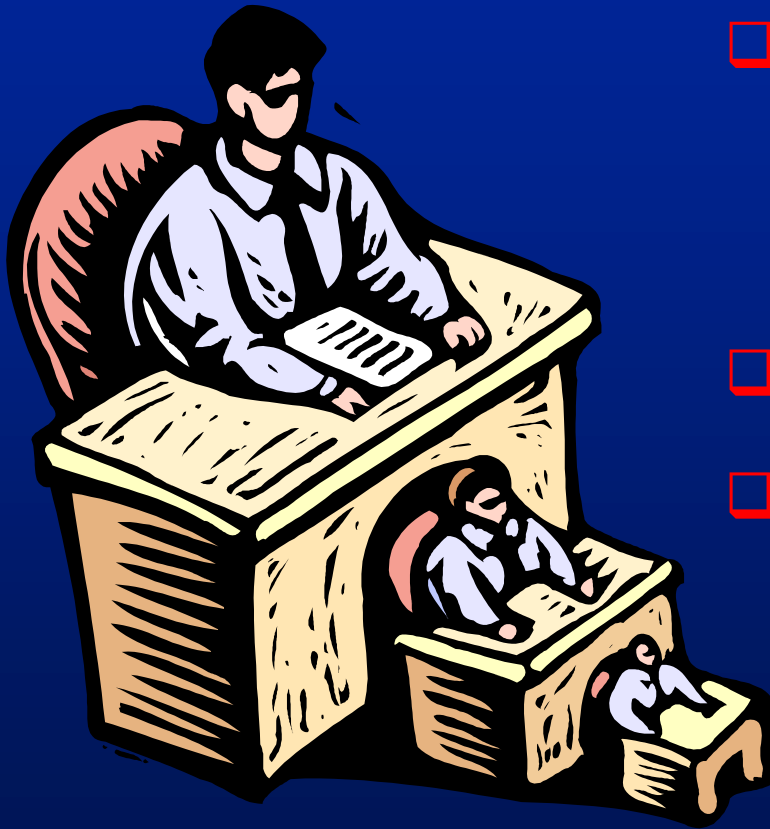
- ❑ Nobody in a supervisory or managerial role over author

- ❑ No users or customers

- ❑ What about analysts, testers, project mgrs for
  - ❑ Analysis, design
  - ❑ Code, tests etc.?

What's a 'Peer'? Are they really best to review my work?

Pros and Cons of Reviews by Peers

+ <u>Pro</u>   **- <u>Con</u>**

In Q & A

What's a 'Peer'? Are they really best to review my work?

Coding Is Smallest Source of Errors

Focusing
here →

Coding
(small functions)

Coding Is Smallest Source of Errors

Diverts
attention
from
here →

System Design

→ Module Design

Focusing
here →

Coding
(small functions)
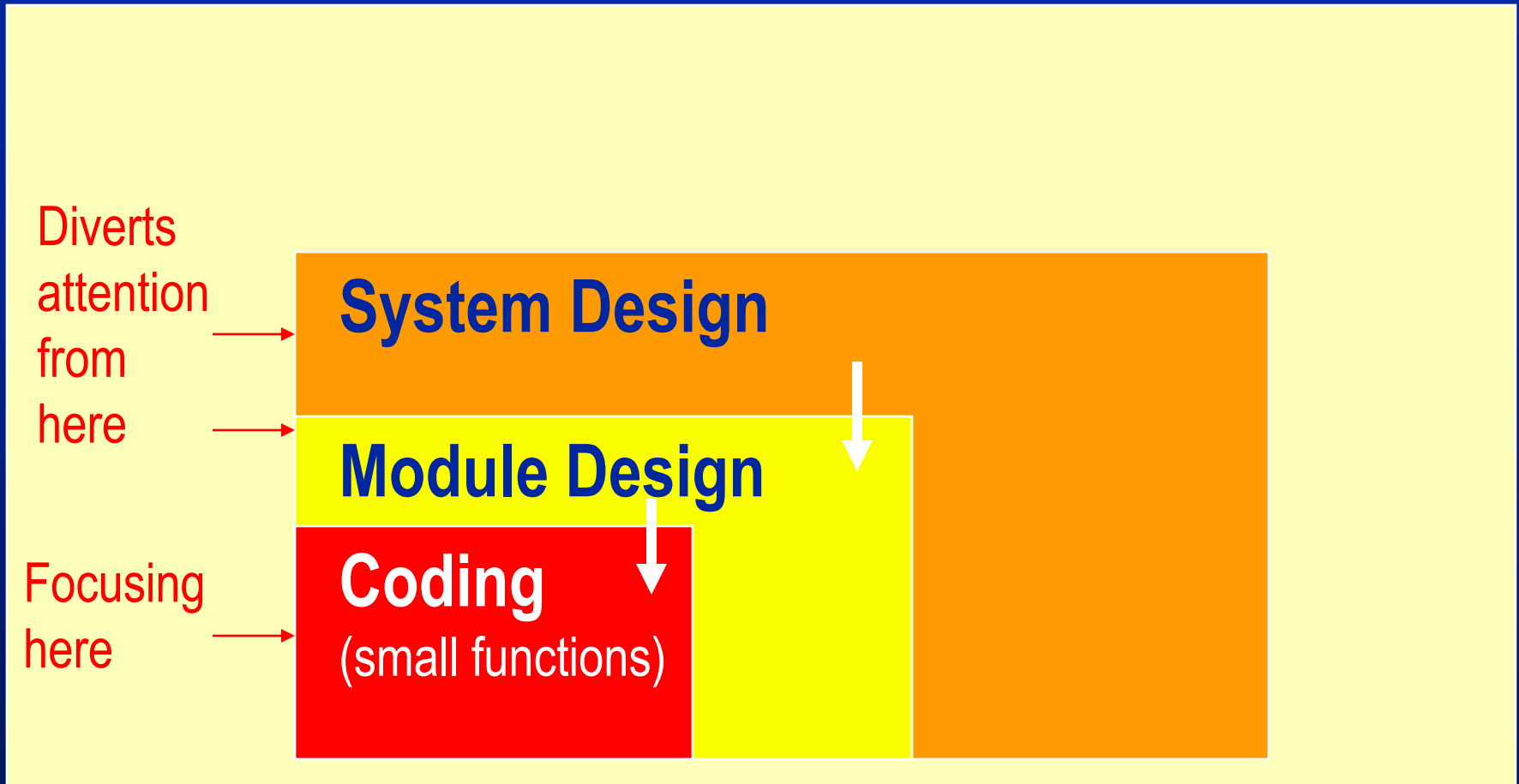
2/3 of errors in delivered code are in the design.

Does essentially having no design increase, decrease, or just mask that?

What's a 'Peer'? Are they really best to review my work?

Coding Is Smallest Source of Errors

Business Requirements

Diverts attention from here →

System Design

Module Design

Focusing here →

Coding
(small functions)
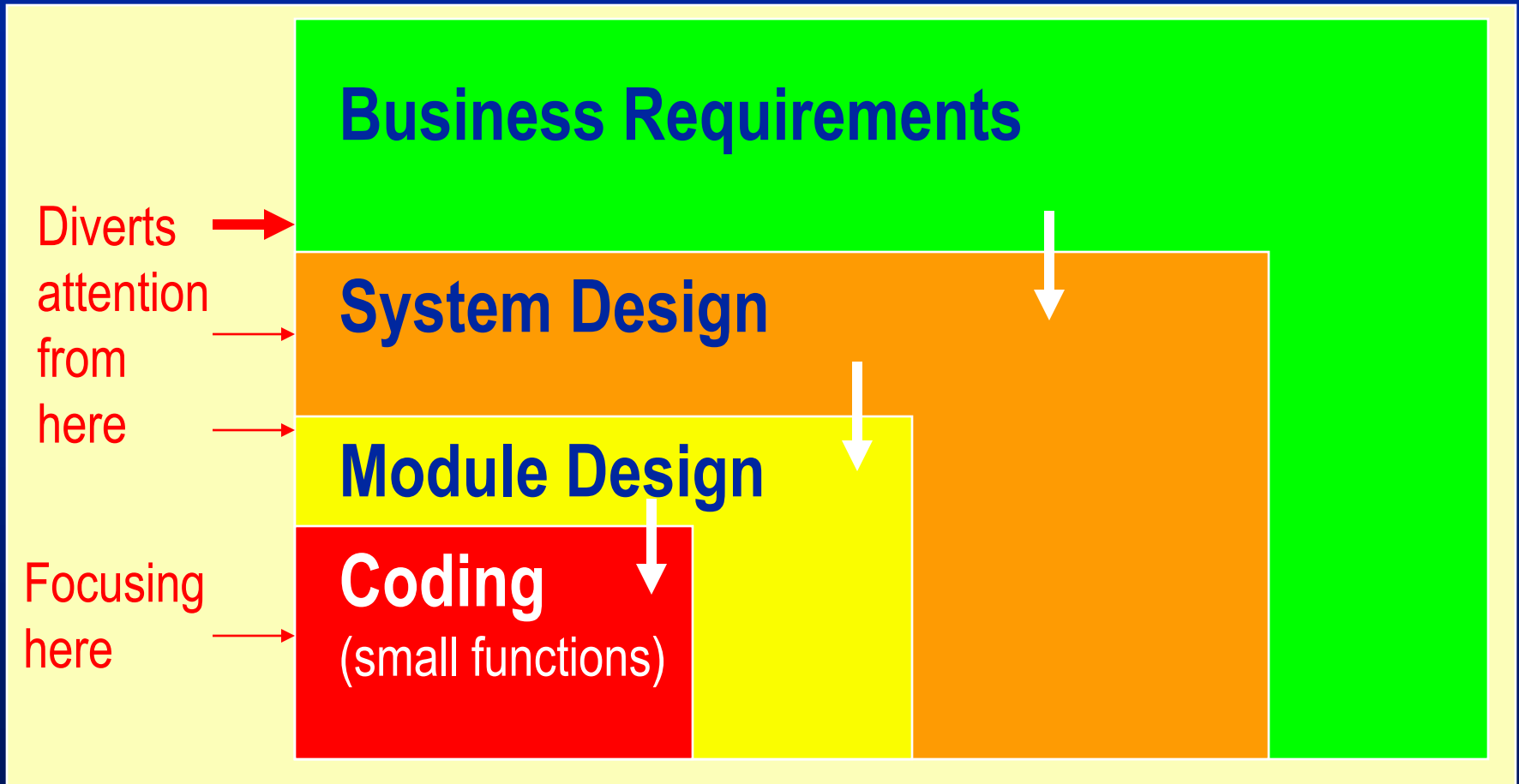
*Missed/incorrect/unclear business requirements
are biggest source of design problems*

Pros and Cons of Reviews by Peers

+ **<u>Pro</u>**

+ Familiar with methods used

+ Think well inside the box

+ Build thing right

- **<u>Con</u>**

- May/probably not be familiar with *why*

- Not so well outside said box

- But not build right thing

In Q & A

What's a 'Peer'? Are they really best to review my work?

Project Team is least likely to find the most important defects— Wrong/missing Requirements, Designs

Others plus checklists are!

http://clipart-library.com/clipart/758856.htm   http://clipart-library.com/clipart/449472.htm
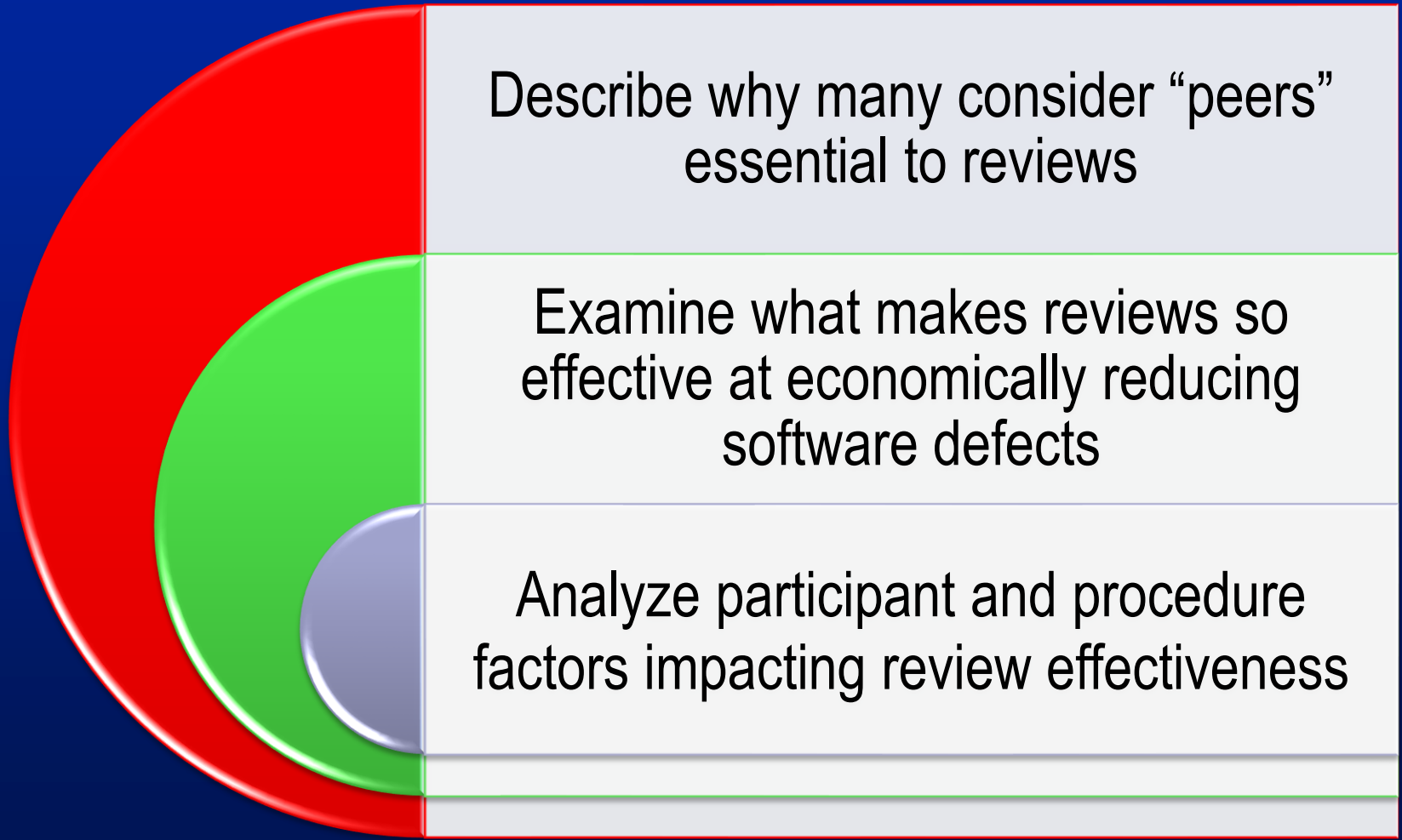
Truly Shifting-Left Includes

- ➢ Discovering REAL Requirements
  - – Defining and Writing REAL Business Requirements
  - – Write Right Agile User Stories and Acceptance Tests
- ➢ Proactive Testing™ Static Analysis (Reviews)
  - – 21+ Ways to Review Requirements Adequacy
  - – 15+ Ways to Review Designs
- ➢ Proactive Testing™ Dynamic Risk-Based Test Design

Objectives

Describe why many consider "peers" essential to reviews

Examine what makes reviews so effective at economically reducing software defects

Analyze participant and procedure factors impacting review effectiveness

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Proactive Systems/Software Quality Assurance (SQA)™

Credibly Managing Projects and Processes with Metrics

System Measurement ROI Test Process Management

Feasibility Analysis

Proactive User Acceptance Testing

Systems Analysis

Reusable Test Designs

System Design

Develop-ment

Defining and Writing Business Requirements

Implement-ation

Operations Maintenance

Test Estimation

Writing Right Agile User Stories and Acceptance Tests

Proactive Testing:

True Shift-Left

Risk Analysis

Risk-Based Test Planning,

21 Ways to Test Requirements

Design, and Management

Managing Software Acquisition and Outsourcing:

> Purchasing Software and Services

> Controlling an Existing Vendor's Performance

Making You a Leader

Robin F. Goldsmith, JD

robin@gopromanagement.com www.gopromanagment.com

- President of Go Pro Management, Inc. consultancy since 1982, working directly with and training professionals in business engineering, requirements analysis, software acquisition, project management, quality and testing.
- Partner with ProveIT.net in REAL ROI™ and ROI Value Modeling™.
- Previously a developer, systems programmer/DBA/QA, and project leader with the City of Cleveland, leading financial institutions, and a "Big 4" consulting firm.
- Degrees: Kenyon College, A.B.; Pennsylvania State University, M.S. in Psychology; Suffolk University, J.D.; Boston University, LL.M. in Tax Law.
- Published author and frequent speaker at leading professional conferences.
- Formerly International Vice President of the Association for Systems Management and Executive Editor of the *Journal of Systems Management*.
- Founding Chairman of the New England Center for Organizational Effectiveness.
- Member of the Boston SPIN and SEPG'95 Planning and Program Committees.
- Attendee Networking Coordinator for STAR, Better Software, and Test Automation Conferences.
- Chair of record-setting attendance BOSCON 2000 and 2001, ASQ Boston Section's Annual Quality Conferences.
- Member IEEE Std. 829-2008 for Software Test Documentation Standard Revision Working Group.
- Member IEEE P730-2014, 2024 standard for Software Quality Assurance Revision Working Group.
- Member IEEE P41062-2023 standard for Software Acquisition Working Group
- International Institute of Business Analysis (IIBA) Business Analysis Body of Knowledge (BABOKv2) subject expert.
- TechTarget SearchSoftwareQuality.com requirements and testing expert.
- Admitted to the Massachusetts Bar and licensed to practice law in Massachusetts.
- Author of book: *Discovering REAL Business Requirements for Software Project Success*
- Author of forthcoming book: *Cut Creep— Write Right Agile User Stories and Acceptance Tests*

What's a 'Peer'? Are they really best to review my work?

Instructors/Coaches/Advisors who are

Good looking!

Entertaining!

Wise! *Brilliant!*

Leaders!

What's a 'Peer'? Are they really best to review my work?

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