Software developer career

Vladimirs Kotovs, 2015 Nov

RTU

Citadele

JavaGURU.lv

Programmer
Teacher
System administrator
System analyst

Linux, Solaris
Java, bash, C, C#
MySQL, Oracle

Citadele

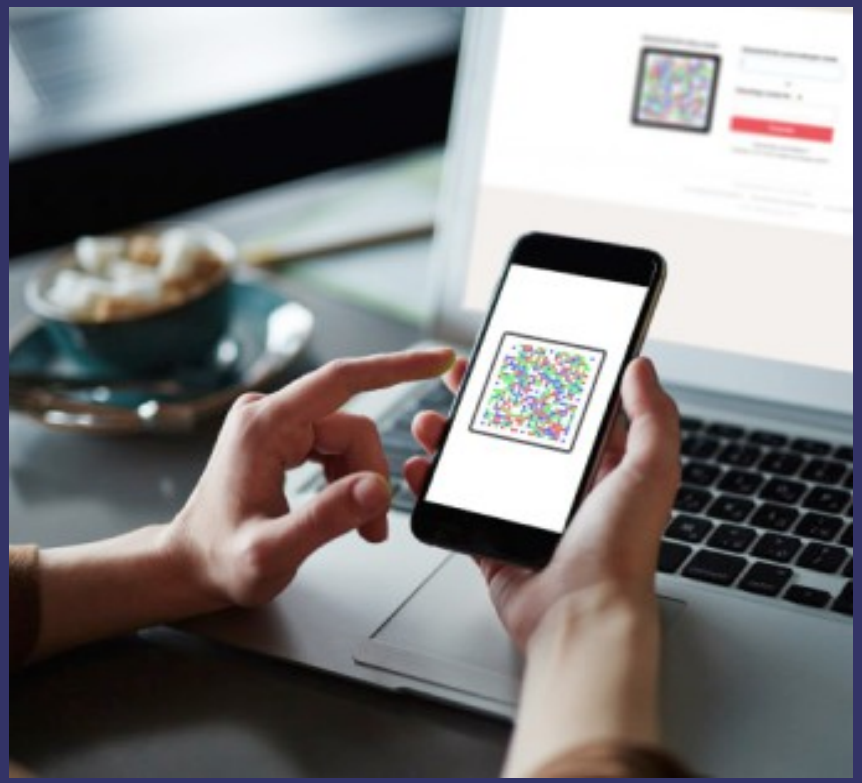
Dynamic organization

Professional team

Manifesto for Agile Software Development

- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

Innovative solutions



http://en.paperblog.com/all-in-the-same-boat-547043/

What makes IT tick?

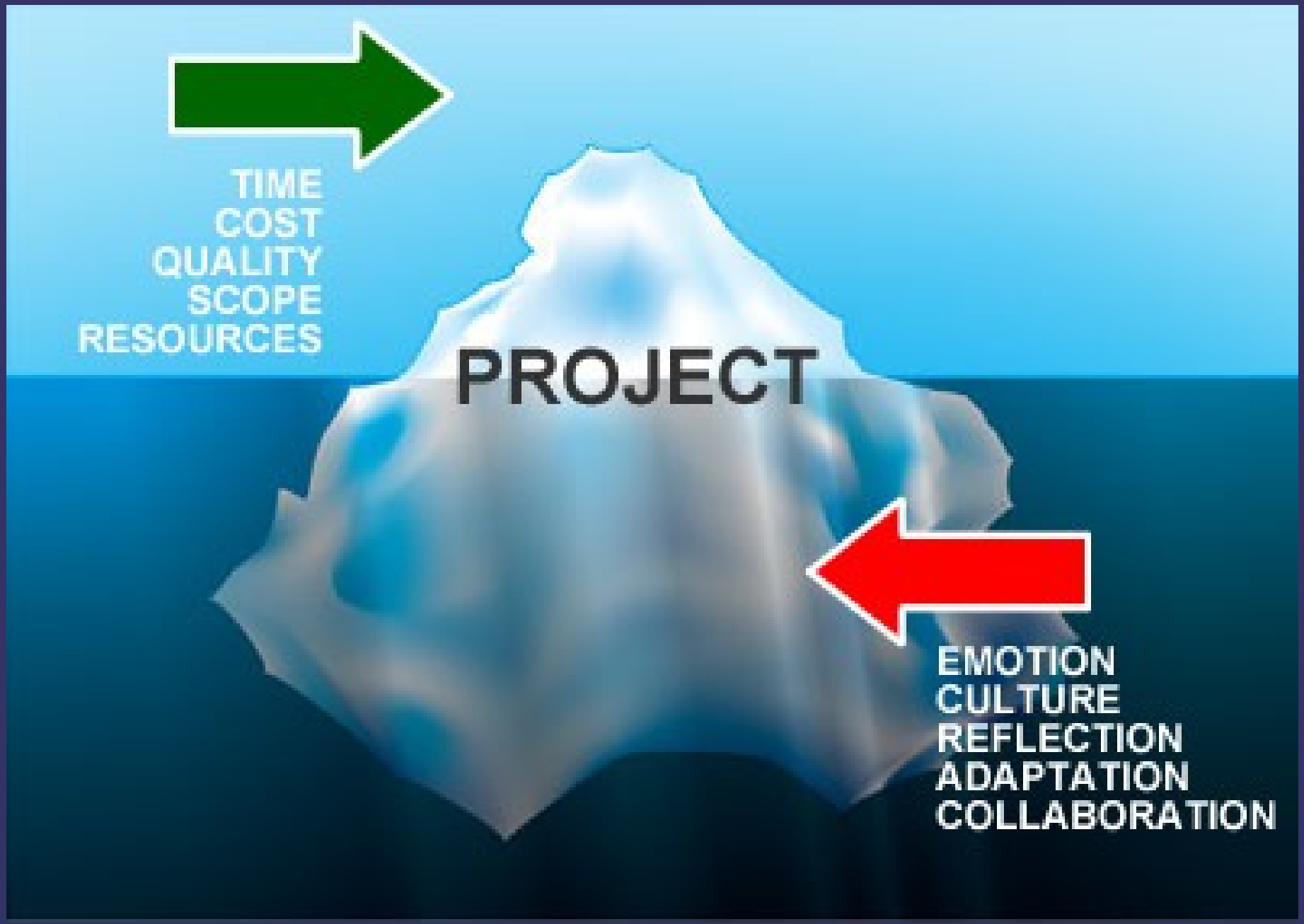
Money?
Software?
Hardware?

Challenges of IT field.

What makes you a star IT professional?

IT education: successful experiences and opportunities.

We don't know the future.



By Simon Baker, http://www.energizedwork.com/weblog/2007/11/xpday7-why-do-agile-projects-fail

Our perception changes...

http://community.humanityhealing.net/group/toolsforshiftingperspective/forum/topics/is-what-you-see-real-change-your-perception-change-your-life

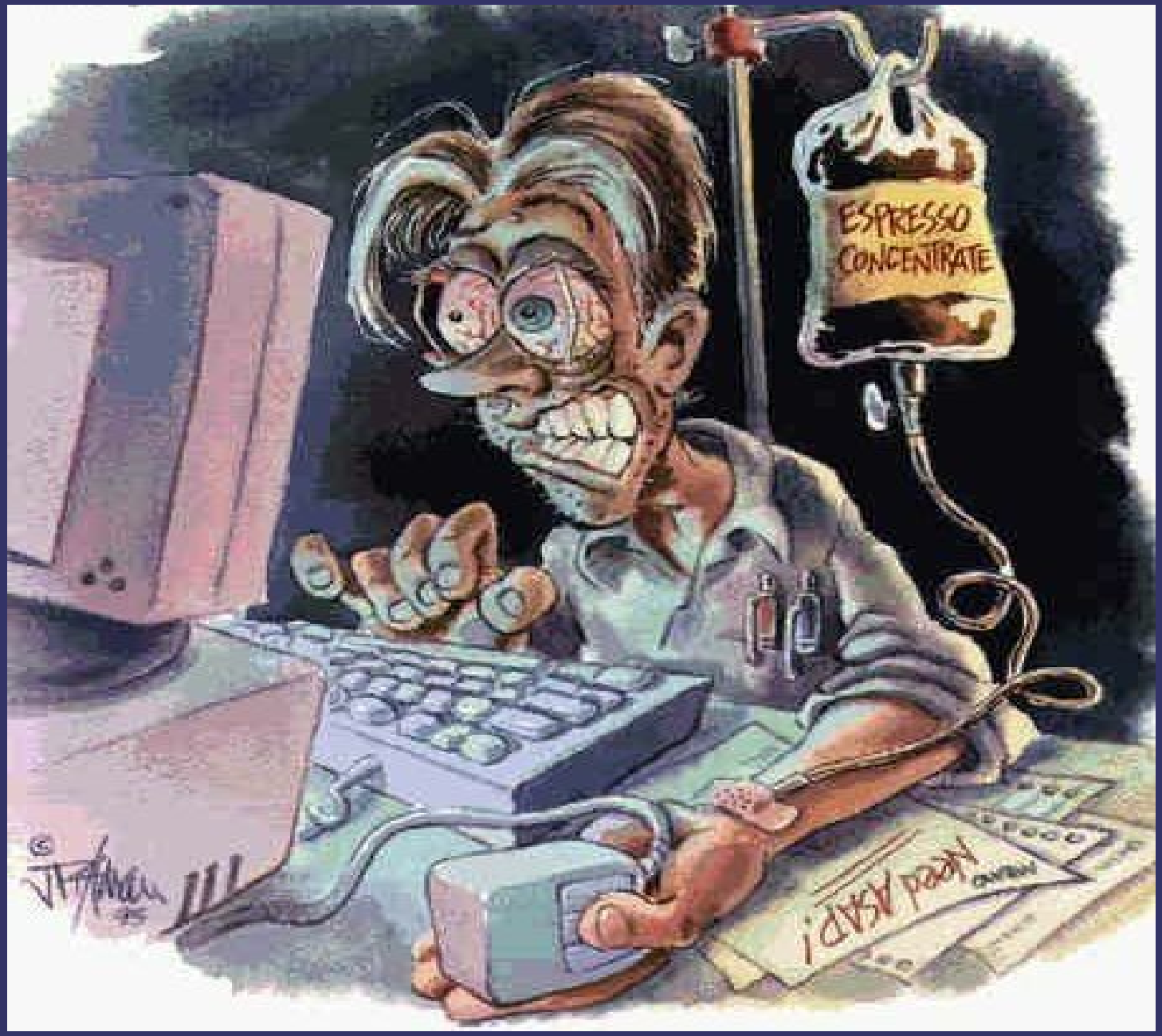
People change...

http://www.tnp.sg/picture/big-picture-week-12-finalist-5

So does the environment.

http://vxside.deviantart.com/art/4-seasons-81436429

We work hard...



http://writerunboxed.com/2006/10/09/driving-the-deadline/

Some of our work goes down the drain

http://brucesmideastsoundbites.blogspot.com/2009/03/down-drain-pouring-money-down.html

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http://www.flickr.com/photos/opensourceway

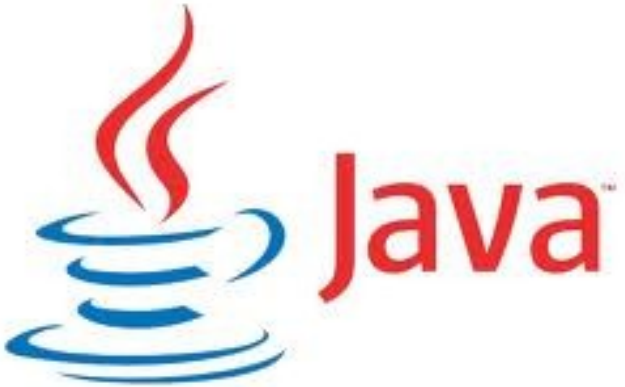
“real life” as opposed to learning enviroment

- Budget, deadline and scope
- Software development != programming

- All this and more in Russian: https://www.youtube.com/watch?v=ewdxrcPz-IY

Persistence,
knowledge,
experience,
10,000 hour rule...

JavaGURU.lv



ORACLE

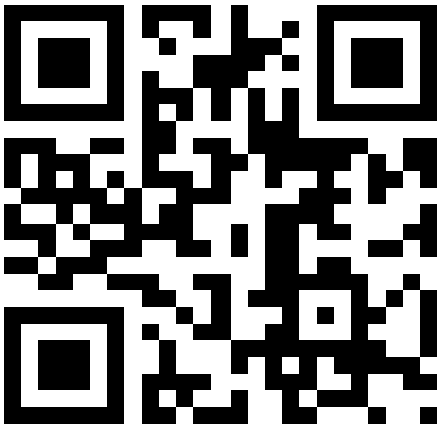
Certified Professional

Java SE 6 Programmer

Java 1 – Java and OOP fundamentals

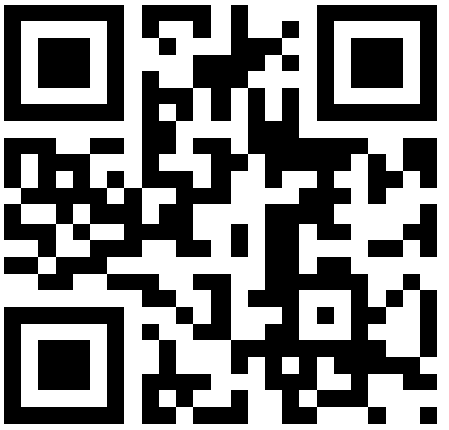
Java 2 – Web development practice

Java 3 – Enterprise technologi



http://www.javaguru.lv

http://www.javaguru.lv



Practice

- http://projects.apache.org/
- Google summer of code
- https://code.google.com/codejam/
- https://github.com/trending

Practice

- https://education.github.com/pack

gdgriga.lv

www.ldn.lv

LatCraft

Coderetreat

An intensive practice event, focusing on the fundamentals of software development and design

http://coderetreat.org/

Great intro (Corey Haines)

http://vimeo.com/18955165

Codekata

Greatness comes from practicing
Applying the theory over and over again, using feedback to get better every time

- http://codekata.com/
- http://butunclebob.com/ArticleS.UncleBob.TheBowlingGameKata

International community

- NDC Oslo conference videos

http://vimeo.com/channels/ndc2014

Traits of a successful IT specialist

We learn,
analyze,
invent,
communicate,
collaborate,
make decisions...

Alphabet taught to kids nowadays

A: APPLE

B: BLUETOOTH

C: CHAT:

D: DOWNLOAD

E: E MAIL

F: FACEBOOK

G: GOOGLE

H: HEWLETT PACKARD

I: Iphone

J: JAVA

K: KINGSTON

L: LAPTOP

M: MESSENGER

N: NERO

O: ORKUT

P; PICASSA

Q: QUICK HEAL

R: RAM

S: SERVER

T: TWITTER

U: USB

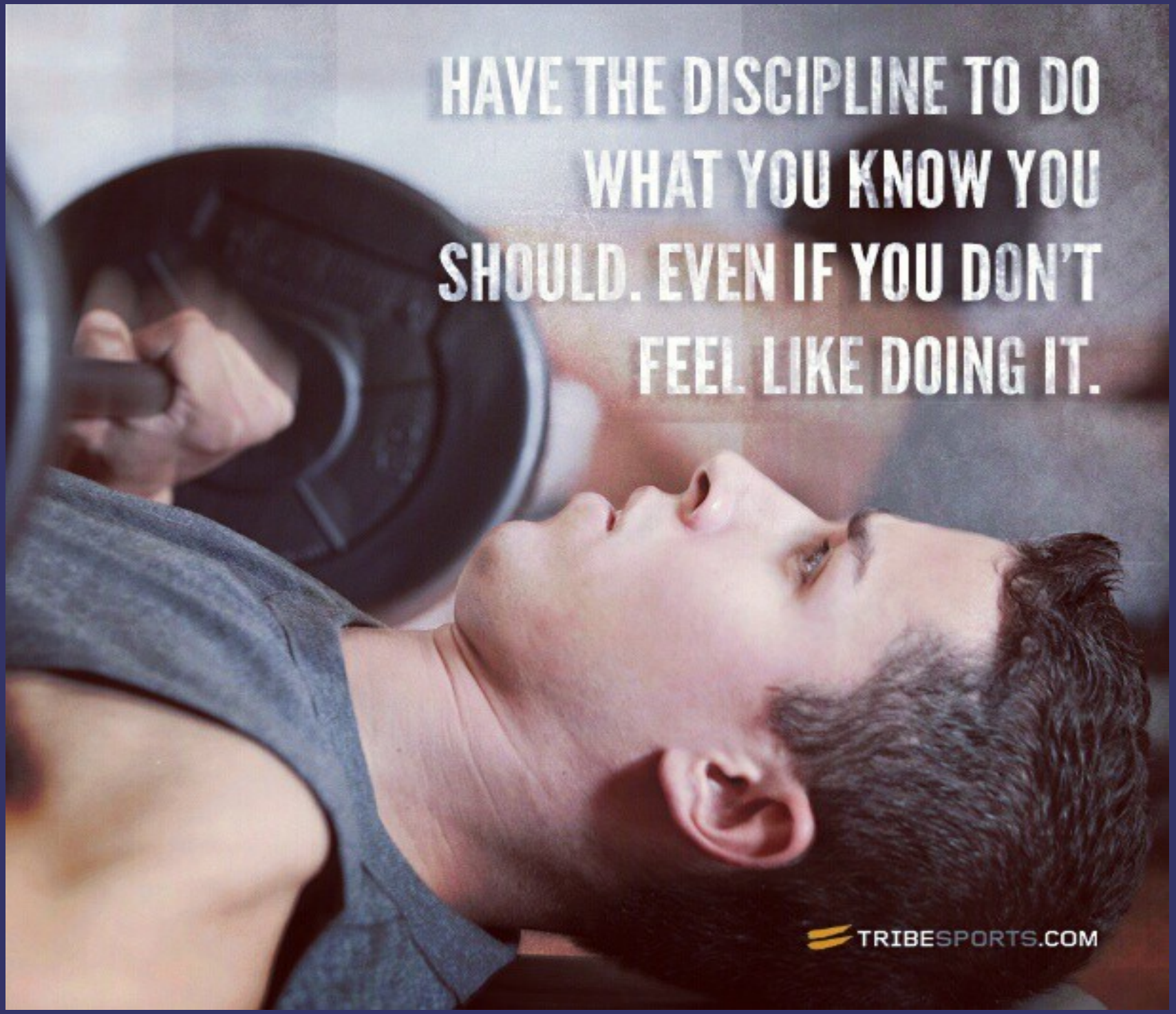
V: VISTA

W: WiFi

X: Xp

Y: YOU TUBE

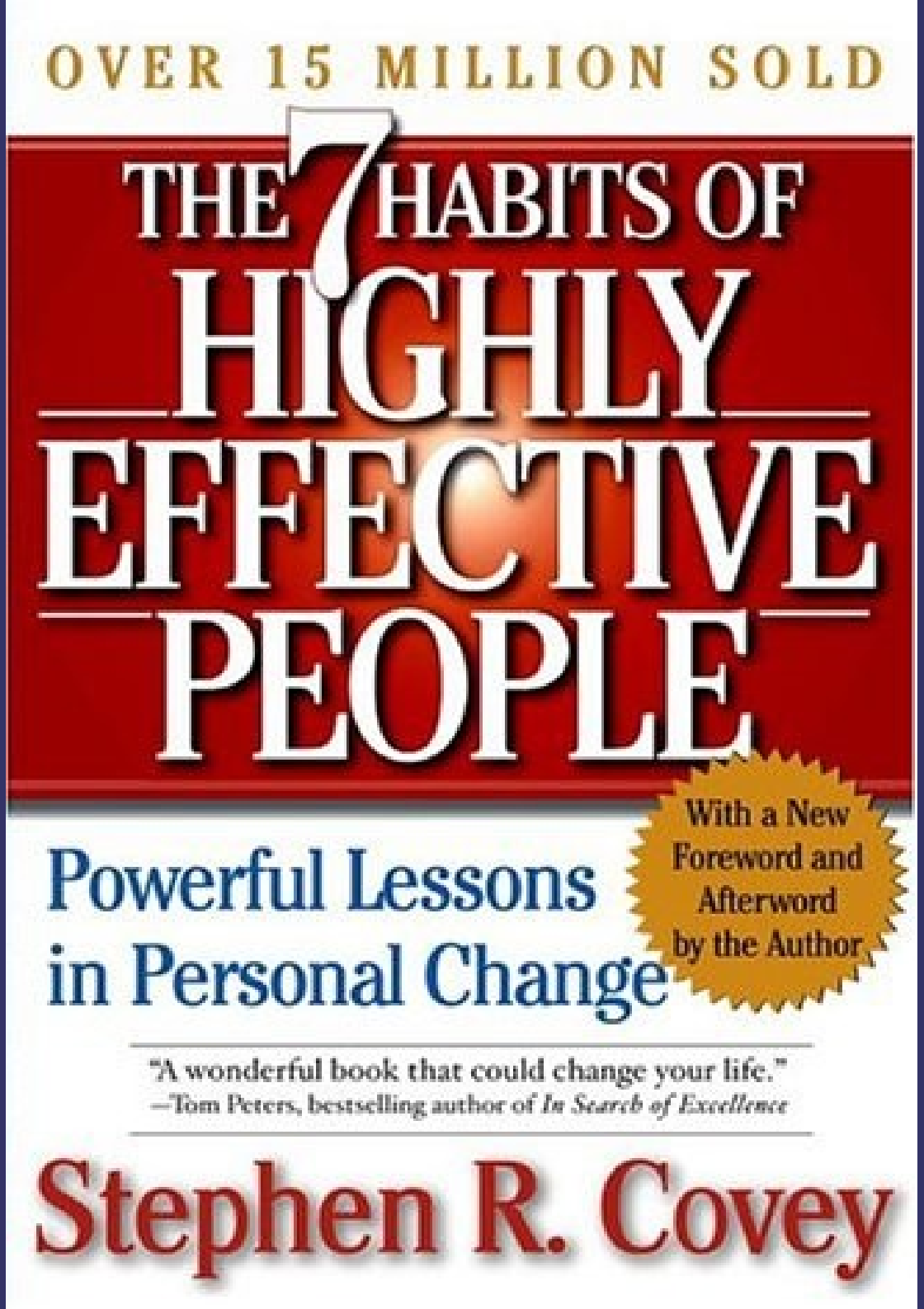
Z: ZORPIA



http://www.flickr.com/photos/tribesports/8434409743/

Some useful productivity articles

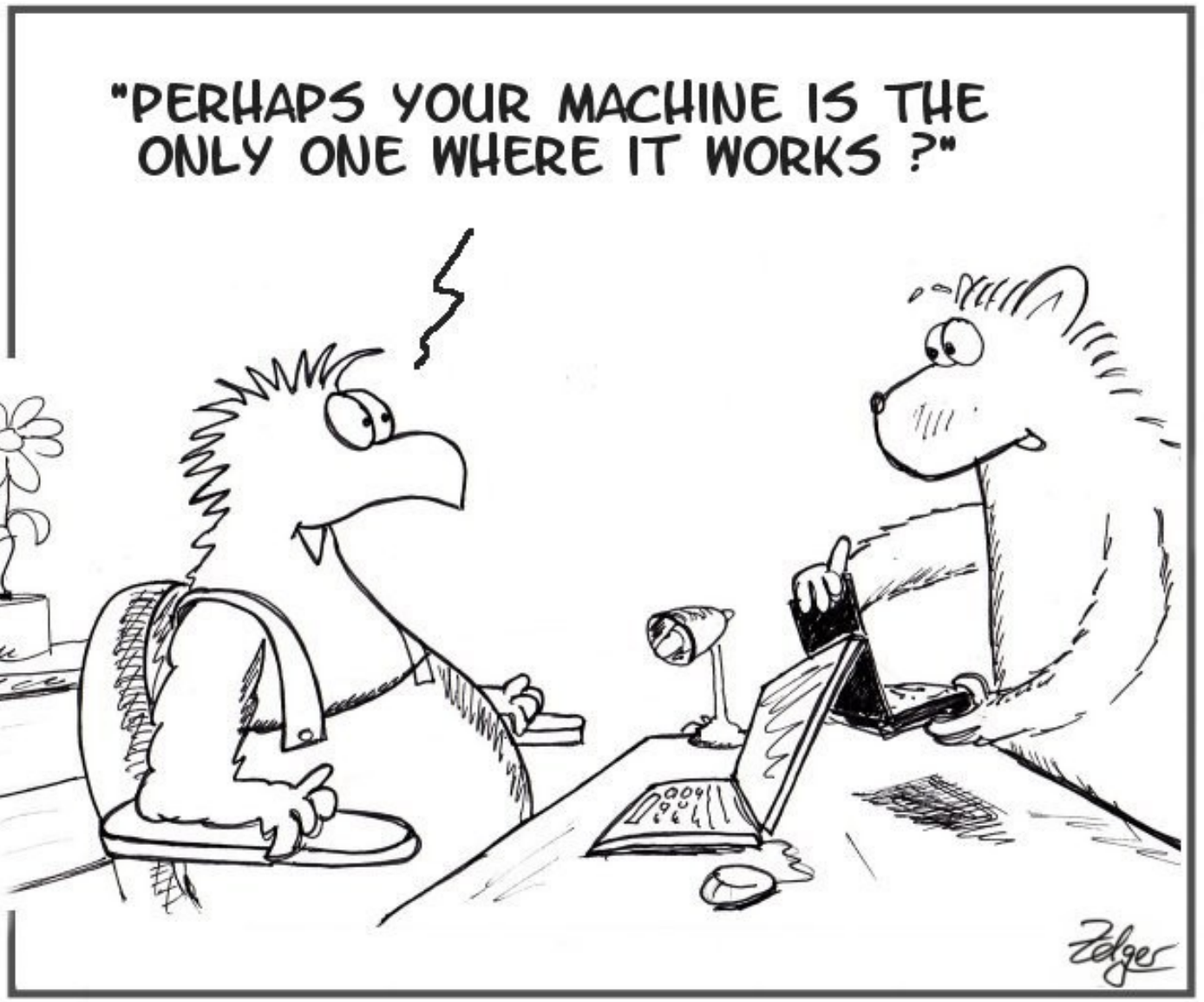
- http://articles.jbrains.ca/GettingStartedWithGettingThingsDone.pdf
- http://www.stevepavlina.com/blog/2005/06/self-discipline/
- http://www.stevepavlina.com/blog/2007/05/33-rules-to-boost-your-productivity/


OVER 15 MILLION SOLD
THE 7 HABITS OF HIGHLY EFFECTIVE PEOPLE
With a New Foreword and Afterword by the Author
Powerful Lessons in Personal Change
"A wonderful book that could change your life."
—Tom Peters, bestselling author of In Search of Excellence
Stephen R. Covey

Pride of workmanship

http://praguestepchild.blogspot.com/2011/02/pride-of-workmanship.html

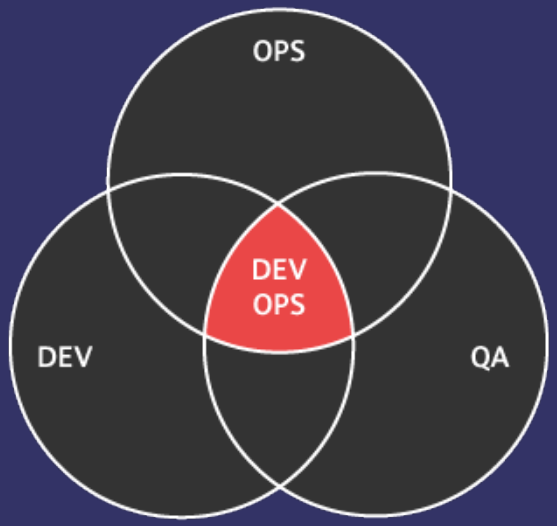
Responsibility...



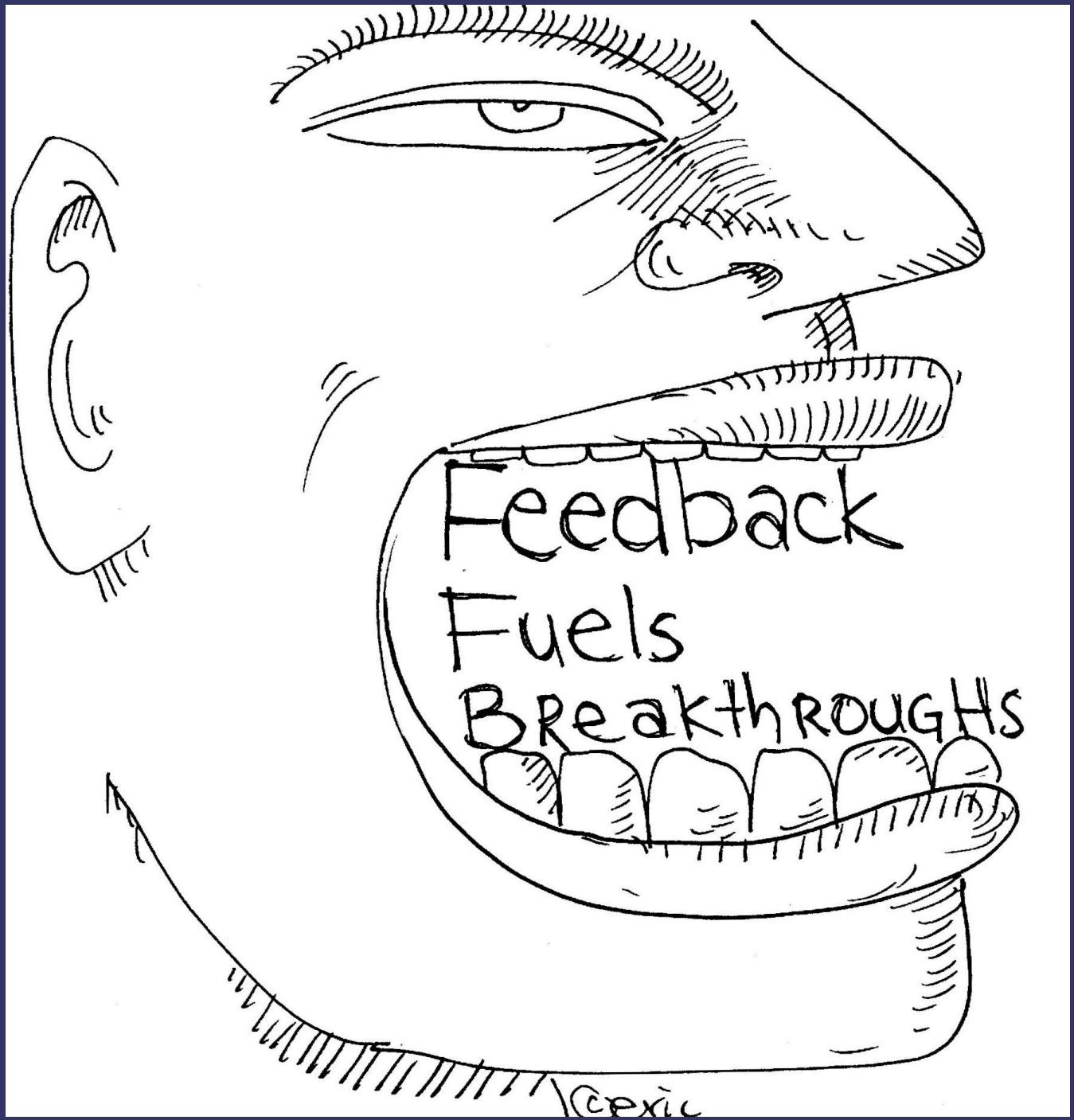
It works on my machine

http://simply-the-test.blogspot.com/2010/05/it-works-on-my-machine.html

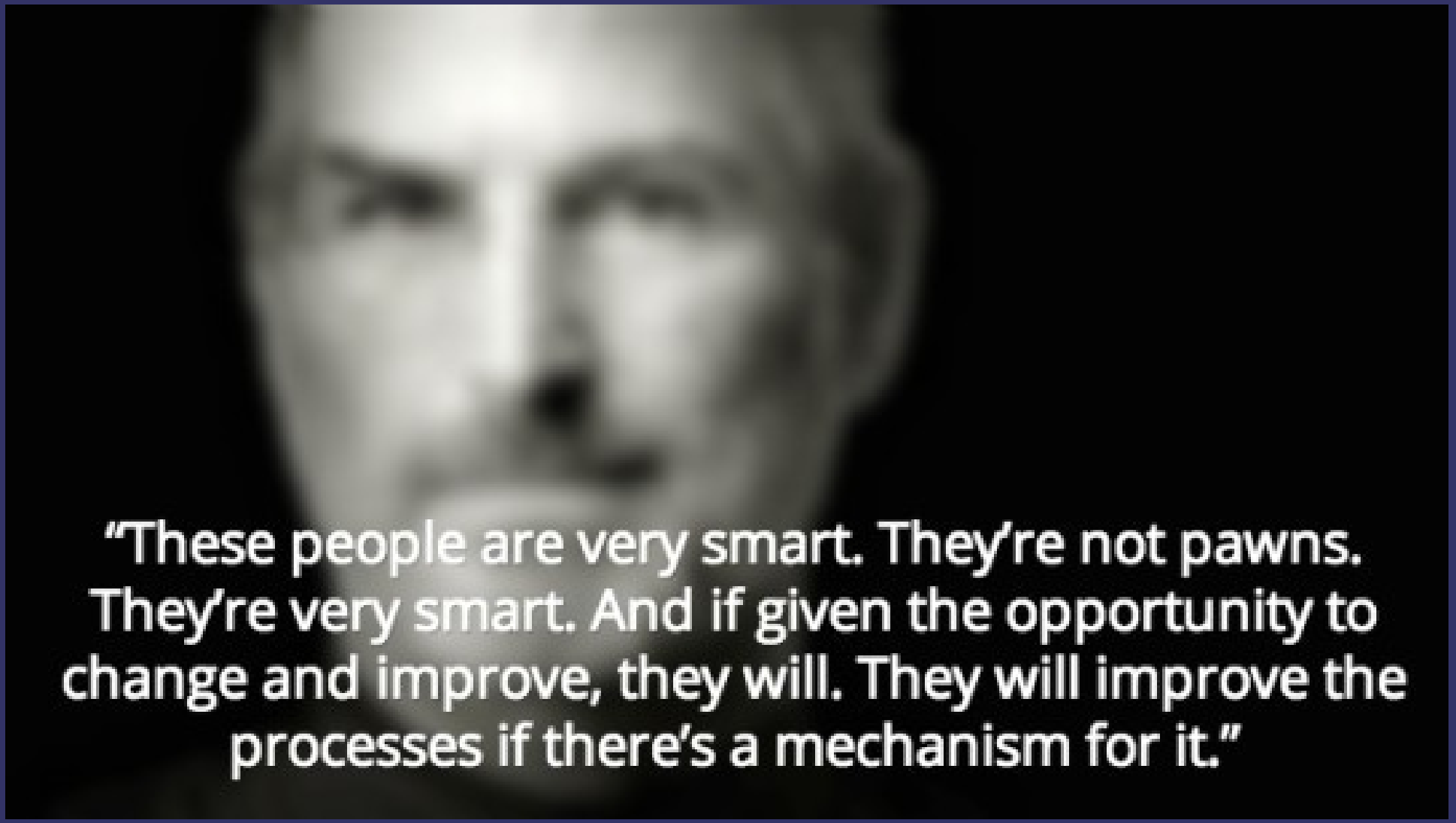
DevOps



http://www.zpesystems.com/wp-content/uploads/2014/09/



http://dharmaconsulting.com/2010/feedback-allergies-2/



http://www.leanblog.org/2014/04/great-steve-jobs-video-transcript-from-1990-on-continuous-improvement/

The Pragmatic Programmers

Agile Retrospectives

Making Good Teams Great

Esther Derby
Diana Larsen

The Addison-Wesley Signature Series

A KENT BECK SIGNATURE BOOK

Implementing Lean Software Development

From Concept to Cash

Mary and Tom Poppendieck

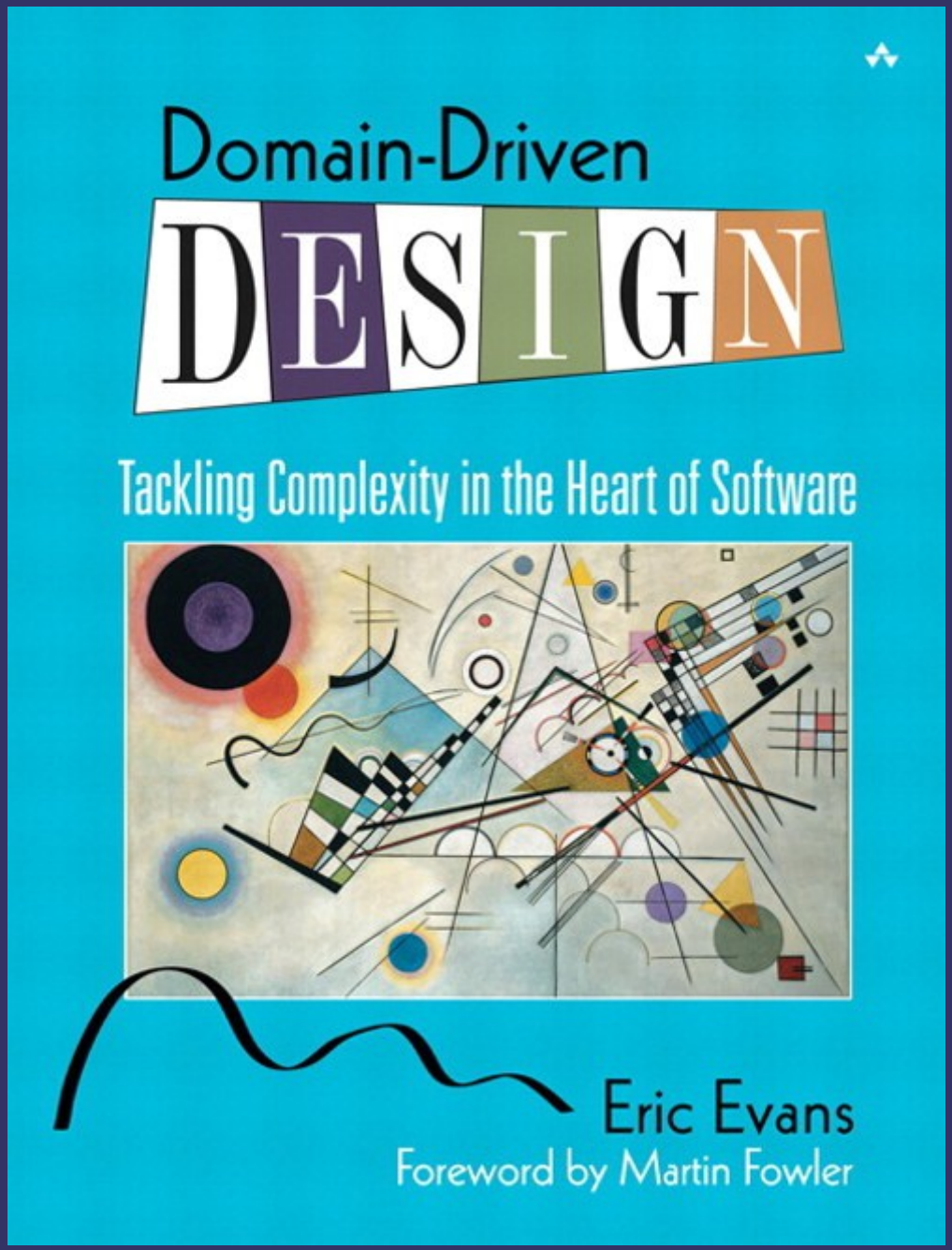
Forewords by Jeff Sutherland and Kent Beck

Architecture & Design

- "Hexagonal Architecture"
  http://alistair.cockburn.us/Hexagonal+architecture
- Microservices
  http://martinfowler.com/articles/microservices.html
- "Domain driven design" by Eric Evans
- OO design patterns

  http://sourcemaking.com/design_patterns
- Evolutionary architecture by Neal Ford

  http://www.ibm.com/developerworks/java/library/j-eaed1/index.html


Domain-Driven
DESIGN
Tackling Complexity in the Heart of Software
Eric Evans
Foreword by Martin Fowler

PRENTICE HALL

Robert C. Martin Series

Clean Code

A Handbook of Agile Software Craftsmanship

Foreword by James O. Coplien

Robert C. Martin

Tools and Process

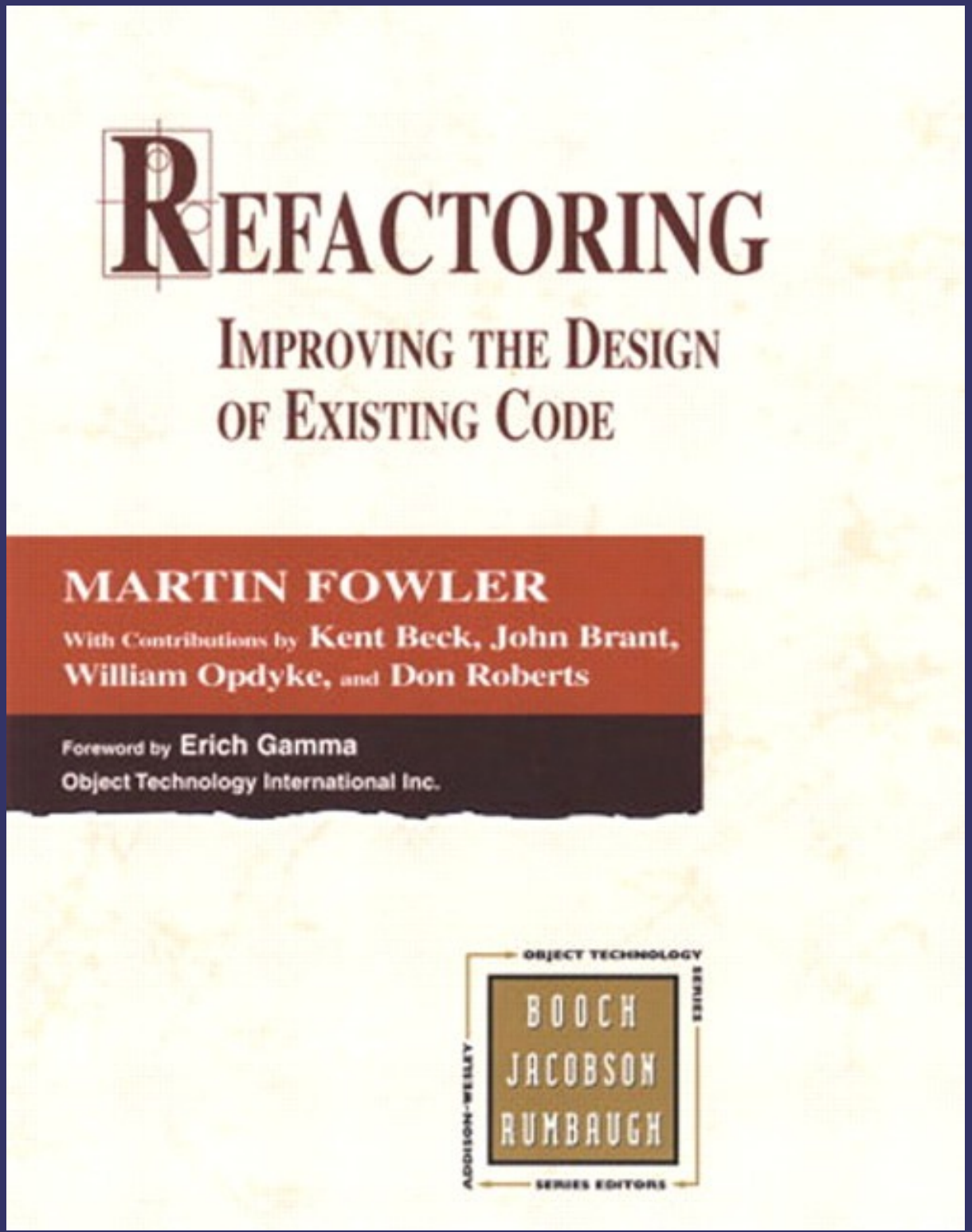
- Refactoring
  http://sourcemaking.com/refactoring
- Version control - git
- Issue tracking
- Automated testing
- Continuous delivery
  http://martinfowler.com/books/continuousDelivery.html
- DevOps
  http://www-01.ibm.com/software/rational/dummiesbooks/devops/
- Continuous integration
  http://martinfowler.com/books/duvall.html

The Pragmatic Programmer

from journeyman
to master

Andrew Hunt
David Thomas

Foreword by Ward Cunningham


REFACTORING
IMPROVING THE DESIGN OF EXISTING CODE
MARTIN FOWLER
With Contributions by Kent Beck, John Brant, William Opdyke, and Don Roberts
Foreword by Erich Gamma
Object Technology International Inc.
OBJECT TECHNOLOGY SERIES
BOOCH
JACOBSON
RUMBAUGH
ADDISON-WESLEY
SERIES EDITORS

Cloud / Highload / Virtualization

- Distributed storage and execution
- Amazon Dynamo
- Google BigQuery
- Docker

Machine Learning

- Spam filtering
- Pattern recognition
- Computer vision

Artificial Intelligence

- Learning
- Perception
- Reasoning
- Problem-solving

see.stanford.edu

Google recommendations

- Intro to Computer Science
  https://www.udacity.com/course/cs101
- Google's Python class
  https://developers.google.com/edu/python/
- Design of computer programs
  https://www.udacity.com/course/cs212
- Software testing and debugging
  https://www.udacity.com/course/cs258
  https://www.udacity.com/course/cs259
- Math for Computer Science
  - http://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-042j-mathematics-for-computer-science-fall-2010/index.htm

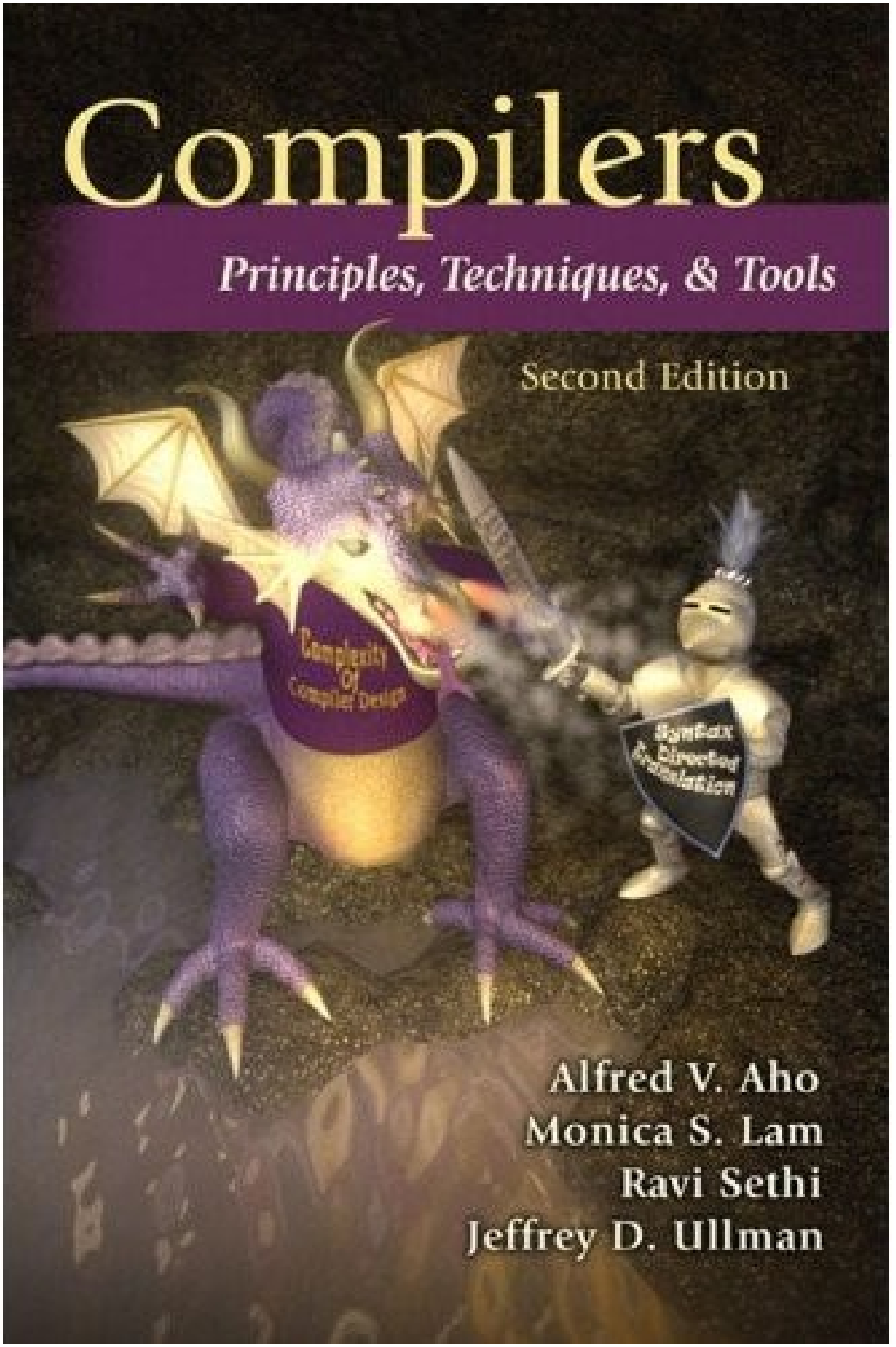
https://www.google.com/edu/tools-and-solutions/guide-for-technical-development/

More recommendations

- Cryptography
  https://www.coursera.org/course/crypto
  https://www.udacity.com/course/cs387
- Algorithms and data structures
  http://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-046j-introduction-to-algorithms-sma-5503-fall-2005/video-lectures/
- Concepts, Techniques, and Models of Computer Programming
  http://mitpress.mit.edu/books/concepts-techniques-and-models-computer-programming

More recommendations

- Operating systems
  https://www.youtube.com/watch?v=XgQo4JkN4Bw&list=PL3289DD0D0F0CD4A3
  CS162 Berkley
- Compilers
  https://www.coursera.org/course/compilers


Compilers
Principles, Techniques, & Tools
Second Edition
Complexity of Compiler Design
Syntax Directed Translation
Alfred V. Aho
Monica S. Lam
Ravi Sethi
Jeffrey D. Ullman

Projects and teams

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THE MYTHICAL MAN-MONTH

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Revised edition of the best-selling project management book.
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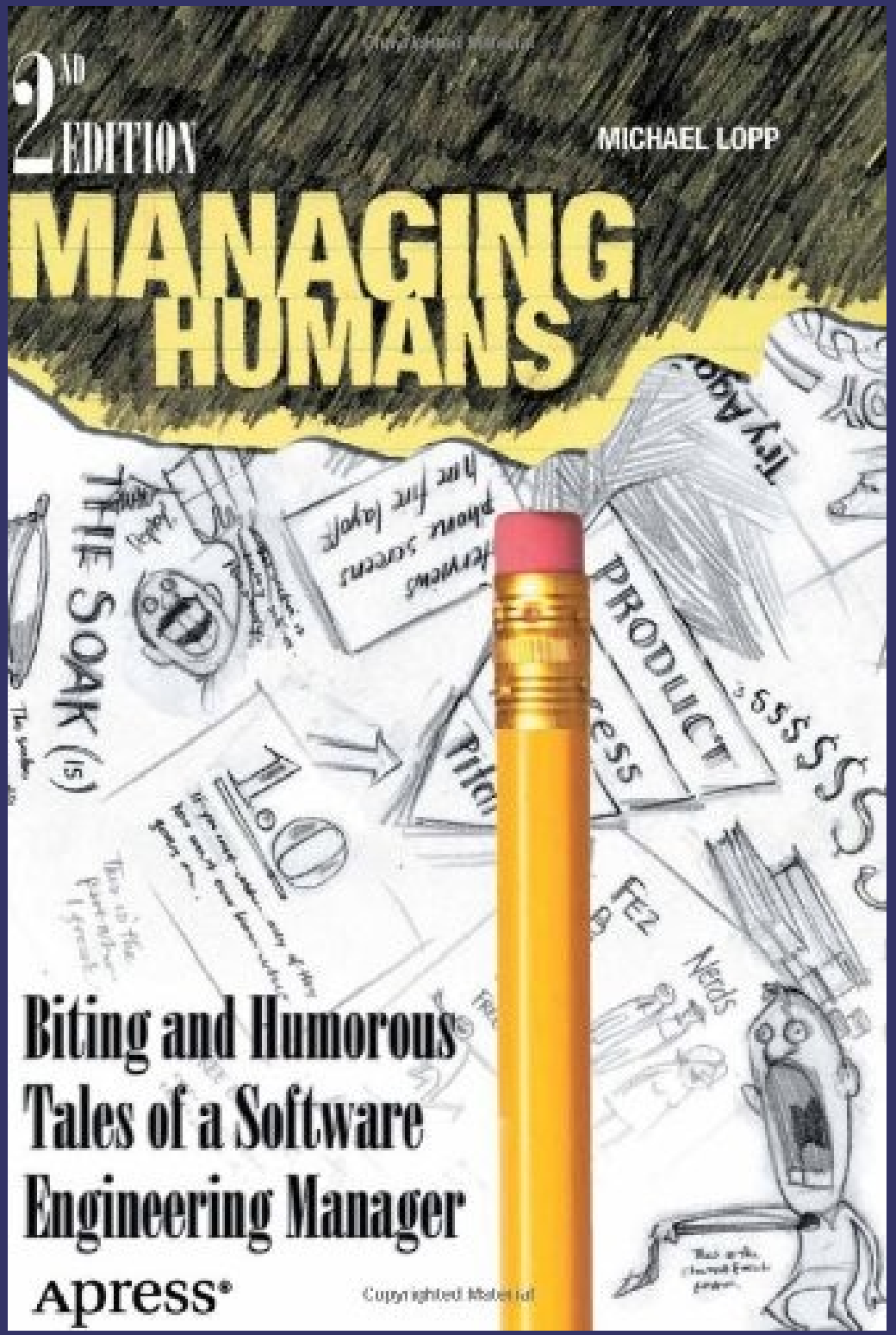
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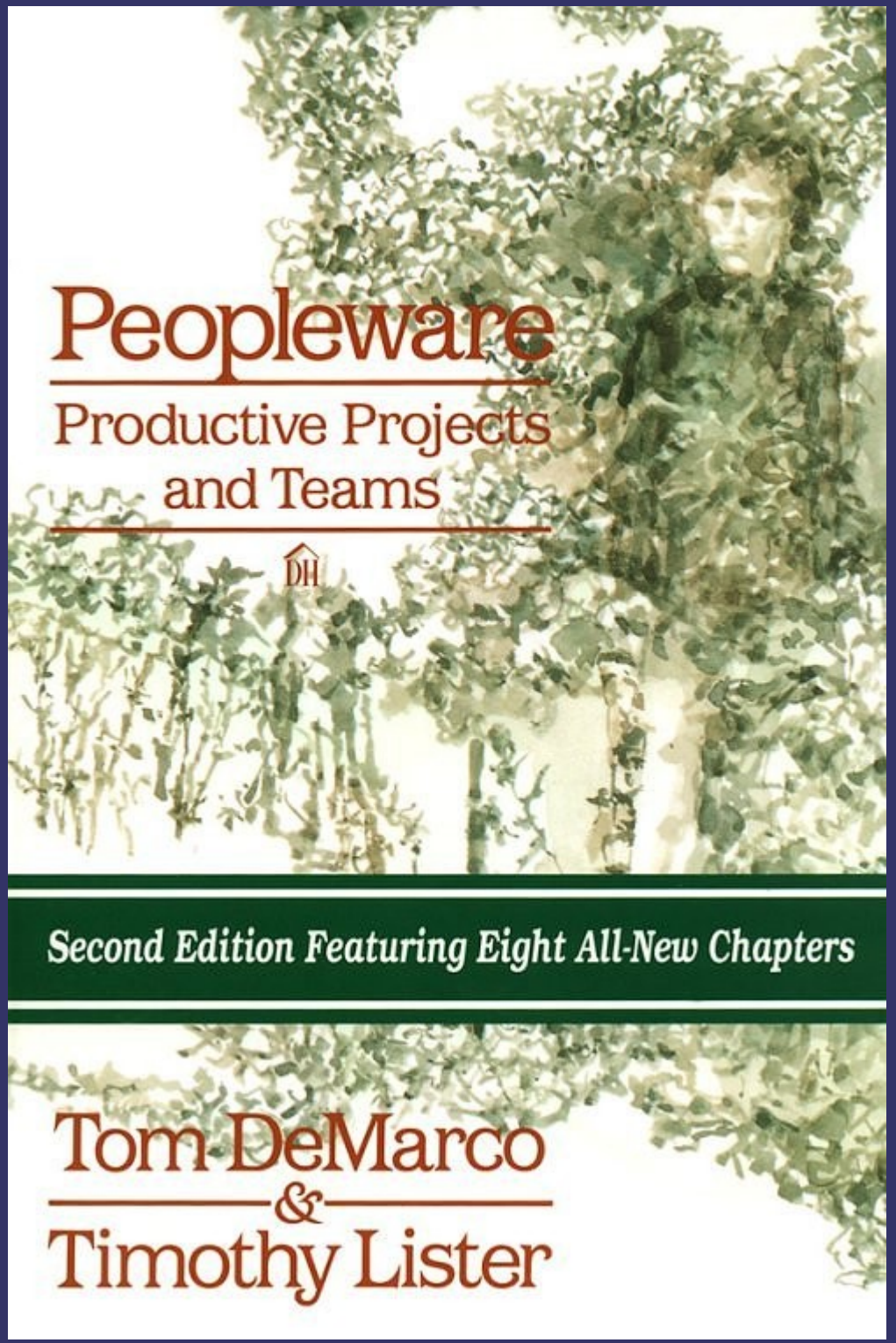
Peopleware
Productive Projects and Teams
DH
Second Edition Featuring Eight All-New Chapters
Tom DeMarco
&
Timothy Lister

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