* Literature References:
* 1. Tom **Gilb**: “**Competitive Engineering**” **2005**
  + A. The book
  + Gilb, Tom, Competitive Engineering, A Handbook For Systems Engineering, Requirements Engineering, and Software Engineering Using Planguage, ISBN 0750665076, 2005, Publisher: Elsevier Butterworth-Heinemann. Sample chapters will be found at Gilb.com.

B. Chapter 5: Scales of Measure:

<http://www.gilb.com/tiki-download_file.php?fileId=26>

C. Chapter 10: Evolutionary Project Management:

<http://www.gilb.com//tiki-download_file.php?fileId=77>

D. Chapter 8, Specification Quality Control

For a summary see URL23.

E. For Extensive technical detail see Gilb& Graham, Software Inspection, 1993, Book [14]

F. Planguage Rules Collection from all chapters

<http://www.gilb.com/dl829>

* 2. William and Ken **Hopper**: The Puritan Gift
* 3. Ralph **Keeney**
* : **Value-Focussed Decision Making**

A. Keeney, Ralph L. 1992. **Value-focused Thinking: A Path to Creative Decision-making**. Cambridge, MA and London: Harvard University Press. ISBN

0-674-93197-1. http://www.fuqua.duke.edu/faculty/alpha/keeney.htm/

B. A Summary of Keeney’s Book

* + - http://lesswrong.com/lw/gdq/valuefocussed\_thinking\_a\_chapterbychapter\_summary/

Get next book electronically!

For part 3

Cite the summary that is in contact

C. Keeney Paper of Chapter

Developing Objectives and Attributes

<http://www.usc.edu/dept/create/assets/001/50847.pdf>

D. After some debate amongst friends, we arrive at the conclusion that Keeney was inconsistent and unclear about his use of terms Fundamental Objectives, and Strategic Objectives. We are going with the terminology we understood from his book, rather than D. link above

* 4. Jack Welch, Jack, **Straight from the Gut**, Warner Business Books, 2001.
* 5. T. Gilb, **Principles of Software Engineering Managemen**t,
  + 1988
    - Internet Chapters (text only, no illustrations):
    - A. pdf ‘Ch 14 POSEM Productivity’ gilb.com/dl560
    - B. pdf ‘Ch 15 POSEM Deeper Perspectives on Evolutionary delivery gilb.com/dl561
    - C. Chapter 13.4 (page 237-241) Open Ended Architecture
    - D. Chapter 21 ICL Inspection Experiences (cited F8.2)

6. **Dan Ariely, The Upside of Irrationality. The unexpected benefits of defying logic at work and at home**

* ISBN 978 0 00 735478-8, UK £8.99, 298 pages, Harper 2010
* 7. Gelb, Michael: **How to Think Like Leonardo Da Vinci**
* **8. Tom Peters**
* **Reinventing Work, the project 50.**
* Quoted in 5.3
* Alfred A. Knopf, New York, 2000, ISBN 0-375-40773-1. See Peters’ website [www.tompeters.com](http://www.tompeters.com/), $15.95
* See also his book ‘the Quick Prototype50’.
* See especially his emphasis on ‘quick prototyping
* 9. **W Edwards Deming, Out of the Crisis**
* [**http://mitpress.mit.edu/books/out-crisis**](http://mitpress.mit.edu/books/out-crisis)
* 10. **Tom Peters,**

**‘In Search of Excellence’, and other books**

**tompeters**.com/

**early books referred to in 5.5, see [8]**

* 11. **Michael Gelb, How to Think Like Leonardo da Vinci:**
* <http://michaelgelb.com/products/>
* 12: **Simon Ramo** (quote in 6.5)

Simon Ramo and Robin K. St.Clair, The Systems Approach: Fresh Solutions to Complex Civil Problems Through Combining Science and Practical Common Sense, 1998, 150pp, © TRW, Inc., Manufactured in USA, KNI Incorporated, Anaheim CA. Free copy at TRW Stand at INCOSE conference 2002.

Free Download: [www.incose.org/ProductsPubs/DOCSystems Approach.pdf](http://www.incose.org/ProductsPubs/DOCSystems%20Approach.pdf)

* 13.  **Robin Olds, FIGHTER PILOT: The Memoirs of the Legendary Ace.**

**386 PAGES Amazon $22.02**

**ISBN 978-0-312-56951-8**

**St Martins Griffin, NY, Stmartins.com**

**Quoted in F3, and 7.3 on grass roots delegation.**

* 14. Gilb& Graham, **Software Inspection**, 1993, Book
* 15. **Joseph M. Juran**
  + **Juran's Quality Handbook: The Complete Guide to Performance Excellence 6/e** Hardcover– June 9, 2010
  + by [Joseph Defeo](http://www.amazon.com/Joseph-Defeo/e/B0053E2SSK/ref=dp_byline_cont_book_1) (Author), [J.M. Juran](http://www.amazon.com/s/ref=dp_byline_sr_book_2?ie=UTF8&field-author=J.M.+Juran&search-alias=books&text=J.M.+Juran&sort=relevancerank) (Author)
  + Cited 7.8?
* 16. **Walter A. Shewhart**
  + A. Economic Control of Quality of Manufactured Product, 1931
  + B. Statistical Method from the Viewpoint of Quality Control, 1939
    - <http://books.google.no/books?id=5utN7ulkCCAC>
* 17. **Craig Kaplan et al Case IBM STL**
  + Secrets of Software Quality by Kaplan, Clark, & Tang (McGraw-Hill 1995)
  + See URL48
* 18. **Jevons, The Principles of Science**, 1874
  + <http://ia600406.us.archive.org/27/items/principlesofscie00jevoiala/principlesofscie00jevoiala.pdf>
  + Free download, not in copyright.
  + <http://en.wikipedia.org/wiki/William_Stanley_Jevons>
  + The machine on the left side of the cover photo is Jevon’s Piano, or Jevon’s Logic machine. (Sounds like a computer to me!)
  + <http://history-computer.com/ModernComputer/thinkers/Jevons.html>
* 19. **Peter Drucker**

**“Management: Tasks, Responsibilities, Practices.”**

Quote 6.10

<http://www.druckerinstitute.com/2013/07/measurement-myopia/>

* 20. Billy Koen
  + Koen, Billy V. 1984. **Toward a Definition of the Engineering Method.** Proceedings of the ASEE-IEEE Frontiers in Education. 14th Annual Conference, Philadelphia, PA. 3-5. October 1984. Pages 544–549. The paper also appeared in Engineering Education. December 1984. Pages 150–155. Also in Spring 1985 in The Bent of Tau Beta Pi. Pages 28–33. A full page extract is in Gilb (1988, Principles of Software Engineering Management). An extended and very interesting comment on the paper’s ideas is in Koen (2003).
* Profession Website; (2014)
* <http://faculty.engr.utexas.edu/koen>
* + Koen, Billy Vaughn. January 2003. **Discussion of the Method: Conducting the Engineer’s Approach to Problem Solving**. Oxford University Press. ISBN 0-195-15599-8. Pages 260. http://www.me.utexas.edu/faculty/people/ koen.shtml/.
* \*
  + Video Presentations 2007 Illinois Lecture
    - <http://faculty.engr.utexas.edu/koen/etc-lecture>
    - (2014 STABLE SITE)

URL1: **Quantifying Management Bullshit**

<http://www.coremag.eu/fileadmin/Papers/Quantifying_Management_TGilb_core3.pdf>

version 18 april 2011

Quantifying Management Bullshit: forcing IT Stakeholders to reveal the value they really want from your IT Project.

By Tom Gilb

<http://www.requirementsnetwork.com/node/2820>

RQNG 25 May 2011

Quantifying Management Bull: Forcing IT stakeholders to reveal the value they really want from your IT project

<http://www.gilb.com/dl465>

CORE Version

URL2: “**Vision Engineering”. Paper for top management planners.**

<http://www.gilb.com/tiki-download_file.php?fileId=237>

This has been substantially rewritten and added to this book as Chapter 11.

URL3: **An Agile Project Startup Week: ‘Evo Start’**

Our Column in AgileRecord.com, as published 7 March 2013

<http://www.gilb.com/dl568>

URL4:

**A. The Agile Evo Project Startup Week Standard**

<http://www.gilb.com/dl562>

This is a detailed standard for conducting an 'Evo' (Evolutionary Project Management, Gilb's Agile Method) as described in my book Competitive Engineering, Chapter 10

<http://www.gilb.com//tiki-download_file.php?fileId=77>

**B. Evo Project Management** Standard, Jan 12 2013

<http://www.gilb.com/dl563>

See also [URL5]

URL5: **ONE WEEK STARTUP PLANNING** FOR PROJECTS; FRONT END TO EVO

* + **A: An Agile Project Startup Week: Papers and slides**
    - Talk **slides** pdf from ACCU Conference, Bristol UK, April 9 2014
    - 90 minutes talk. Includes Startup Planning for Business Startups, Confirmit, US DoD case, 2 Bank cases, Detailed Startup week outlines and links to sources.
    - <http://www.gilb.com/dl812>
    - see also [URL4]
  + B. See Persinscom Case (cited in URL16 too)
    - **“111111** **Unity Method of Decomposition into weekly increments of value delivery”**. (10 min. talk slides)
    - <http://www.gilb.com/tiki-download_file.php?fileId=451>
    - Includes Persinscom case US DoD.
  + C. **Software Plans in Less Than a Week** 
    - <http://www.dtic.mil/ndia/2004cmmi/CMMIT7Tue/MelissaOlson.pdf>
    - Melissa Olson  
      Raytheon Company McKinney, TX  
      972-952-4502 Melissa\_olson@raytheon.com Abstract #1196

URL6: **No Cure No Pay Contracting**

Agile Contracting for Results The Next Level of Agile Project Management: Gilb's Mythodology Column, in Agilerecord August 2013

<http://www.gilb.com//dl581>

see in that respect

* + - [www.flexiblecontracts.com](http://www.flexiblecontracts.com)

B. No Cure Slides

<http://www.gilb.com/tiki-download_file.php?fileId=85>

C. NO Cure Paper

<http://www.gilb.com/tiki-download_file.php?fileId=38>

URL7:  **Robustness decomposition**

2013 Lightning Talk 15 min. At ACCU Conference 2013

Robustness, Softcrafters, User Stories

<http://tinyurl.com/bnurqec>

* URL8: **Top Ten Critical Objectives and Vision Engineering**
* A. Gilb‘s Mythodology Column

The **Top 10 Critical Requirements** are the Most Agile Way to Run Agile Projects

<http://www.gilb.com/dl554>

B. **Vision Engineering** paper

<http://www.gilb.com/tiki-download_file.php?fileId=237>

This is also URL2

Rewritten as Chapter 11 of this book.

* URL9. **Quantifying the Unquantifiable** Trondheim,
  + 17.5 minutes. “Quantifying the Unquantifiable”, TEDx Talk, Video, 2013

<http://tinyurl.com/GilbTedx>

<http://www.youtube.com/watch?v=kOfK6rSLVTA&list=PLylSVHkZybrxemH8D1D7zdq2Dmn06nh7m&index=5>

Sept 22 2011 Primary Control Dashboard slides

<http://www.gilb.com/tiki-download_file.php?fileId=483>

Setting and Tracking Project Objectives (BCS Dec 2010 Talk)

<http://www.gilb.com/tiki-download_file.php?fileId=455>

Top level Critical Project Objectives ROOTS Version.pptx http://www.gilb.com/tiki-download\_file.php?fileId=180

Dashboard Talk JPM Feb 2010

http://www.gilb.com/tiki-download\_file.php?fileId=385 (obsolete see

http://www.gilb.com/tiki-download\_file.php?fileId=483)

* URL10: **Quality Quantification.**

A. TEDx Talk, **Quantifying the Unquantifiable**

Trondheim 2013 Tom Gilb 17.5 minutes

<http://www.youtube.com/watch?v=kOfK6rSLVTA&list=PLylSVHkZybrxemH8D1D7zdq2Dmn06nh7m&index=5>

<http://tinyurl.com/GilbTedx>

B. **Quality Quantification** Paper

http://www.gilb.com/tiki-download\_file.php?fileId=124

C. SLIDES: **Quantifying Quality: How to Tackle Quantification of the Critical Quality aspects for Projects for Both Requirements and Designs**, 2011 version

<http://www.gilb.com/tiki-download_file.php?fileId=486>

D. Handbook: Competitive Engineering, Chapter 5 **Scales of Measure.**

<http://www.gilb.com/tiki-download_file.php?fileId=26>

* URL11: **Estimation**

**T. Gilb, ‘Estimation: A Paradigm Shift Toward Dynamic Design-to-Cost and Radical Management.** [**http://www.gilb.com/tiki-download\_file.php?fileId=460**](http://www.gilb.com/tiki-download_file.php?fileId=460)

Software Quality Professional, VOL. 13, NO. 2/© 2011, ASQ

* + Slides made for BCS SPA June 1 2011

**'Estimation, a Waste of Time'**

<http://www.gilb.com/tiki-download_file.php?fileId=470>

* URL 12: **QUINNAN AND MILLS CLEANROOM**

<http://www.gilb.com/dl821>

is contained in these slides.

* URL13: **DEEPER PERSPECTIVES ON EVO DELIVERY**

Chapter 15 in (1988) Principles of Software Engineering management

[www.gilb.com/dl561](http://www.gilb.com/dl561)

“Deeper Perspectives on Evolutionary Delivery”

plus a page extra of quotations from Agile Gurus crediting it as inspiration for them, and it being first.

* URL14: “**POWER TO THE PROGRAMMERS”** TALK SLIDES AND VIDEO

Note Paul Klipp has transcribed this and published my talk in a book. 21.7.14 mail hpps://leanpub.com/ACE2014

<http://www.gilb.com/dl821>

(Slides)

**Power to The Programmers**, as held Krakow ACE Conference June 2014

Video: <http://vimeo.com/98733453>

EDIT NOTE; POLAND HAS ASKED FOR A PAPER ON THIS, NOT WRITTEN AS OF 3 AUG

* URL15: **Twelve Tough Questions**

12 tough questions paper

<http://www.gilb.com/tiki-download_file.php?fileId=24>

A summary of 12 Tough Questions was published in 2005 in the Competitive Engineering book.

* URL16: **Decomposition of strategies by Value**

**A. “Decomposition of Projects - How to design small incremental result steps”**, 2008 Paper

<http://www.gilb.com/tiki-download_file.php?fileId=41>

The 20 decomposition principles alone, from CE [1) Ch. 10 on Evo are in the book at Figure 5.6 A

**B. “The Unity Method of Decomposition”**

Column 2 of Gilb’s Mythodology

in Agile Record

<http://www.gilb.com/dl826>

**C. “111111** **Unity Method of Decomposition into weekly increments of value delivery”**. (10 min. talk slides)

<http://www.gilb.com/tiki-download_file.php?fileId=451>

Includes Persinscom case US DoD.

* URL17: Competitive Engineering, Chapter 5 **Scales of measure**

<http://www.gilb.com/tiki-download_file.php?fileId=26>

URL18: Competitive Engineering, Chapter 10: **Evolutionary Project Management:**

<http://www.gilb.com//tiki-download_file.php?fileId=77>

* URL19: **Keeney**

A **Summary** of Keeney’s Book

<http://lesswrong.com/lw/gdq/valuefocussed_thinking_a_chapterbychapter_summary/>

B. **Slides** for Kenney

Gilb: Productivity Slides incl Ericsson, and Keeney

<http://www.gilb.com/dl559>

* URL20: **Gilb Principles collection**

<http://www.gilb.com/tiki-download_file.php?fileId=352>

**Competitive Engineering** book Principles Gilb and Others 8MB.

Extended Collection, **Undergraduate Basics (Paper)** Principles, Gilb’s Datamation **Laws of Unreliability**, ICL **Bill of Rights**, Demarco and Gilb’s Law of Measurability, Risk Principles, Clinical Risks Slides, GILB’S INTERPRETATION OF **ERICSSONS CORPORATE QUALITY POLICY**, **Decomposition Principles** (from CE 10), **12 Tough Questions**,

* URL21: **Impact Estimation**

Impact Estimation Table MASTER.ppt (8.49 Mb)

You can download this file using: <http://www.gilb.com/tiki-download_file.php?fileId=146>

**Design Evaluation** Paper

<http://www.gilb.com/tiki-download_file.php?fileId=58>

See **IE Table Chapter in CE Book** [1]

**Impact Estimation Tutorial** MASTER 2012\_compressed.pdf

<http://www.gilb.com/dl553>

**Impact Estimation Tables**

**Understanding Complex Technology Quantitatively**

<http://www.crosstalkonline.org/storage/issue-archives/1998/199812/199812-Gilb.pdf>

Crosstalk, US DoD, December 1998.

URL22. **Intel Specification Quality Control Experience + Planguage**

“The Impact of a Requirements Specification on Software Defects and Other Quality Indicators”

John Terzakis

Intel Corporation

August 31, 2011 RE 11 Conference Trento, Italy

<http://selab.fbk.eu/re11_download/industry/Terzakis.pdf>

URL23: **Specification Quality Control**

**“Agile Specification Quality Control:**

**Shifting emphasis from cleanup to sampling defects”**

, in Testing Experience, March 2009

<http://www.gilb.com/tiki-download_file.php?fileId=264>

See also Chapter on SQC in CE [1] book.

See also URL44 (McDonnell-Douglas, Boeing, Philips cases)

See Intel case, URL45

* + - The Impact of a Requirements Specification on Software Defects and Other Quality Indicators by john.terzakis@intel.com

URL24: **Human Values**

* + hayyalee.com/wp-content/uploads/2010/04/List-of-Personal Values

URL25: <http://www.thinkatheist.com/profile/PeytonDracco>

URL26: **Modelling and Tailoring Using Planguage**

A. **Agile Aspects of Planguage for Cost-Effective Engineering**

By Tom Gilb and Lindsey Brodie

Agile Record Issue 05

January 2011

[www.Gilb.comdl39](http://www.Gilb.comdl39)

[www.agilerecord.com](http://www.agilerecord.com)

Modelling:

B. **“What is drastically wrong with most software engineering modelling languages and approaches, and 10 necessary principles for a really good modelling language”**

<http://www.gilb.com//dl795>

45 minute lecture, pdf format, 62 slides

Quality Days Conference, Vienna

10:45 to 11:30 , Wednesday January 15 2014

C. Link to 13January 2014 Vienna Quality Days workshop slides on Modelling

<http://tinyurl.com/QWGILB>

**“How to Model Qualitative aspects of software requirements, software architecture, and project progress – quantitatively**” (3.5 hours)

URL27 **Raytheon Case.**

**A.** Ray Dion et al

“Raytheon Electronic Systems Experience in Software Process Improvement”

TR-017

MAY 2014 new URL site

<http://resources.sei.cmu.edu/asset_files/TechnicalReport/1995_005_001_16415.pdf>

See Appendix B here for a dozen related papers.

Such as

“Process Improvement and the Corporate Balance Sheet,” IEEE Software, July 1993

* “Measuring the ROI of Software Process Improvement,” DACS Fourth Annual Software Quality Workshop, August 3, 1992
  + **B. Experiences in  
    Root Cause Analysis and Defect Prevention Methods, slides** 
    - Kelly L. Lanier Raytheon Network Centric Systems [klanier@raytheon.com](mailto:klanier@raytheon.com)

[www.dtic.mil/ndia/2004cmmi/CMMIT5Tue/**Root**\_**CauseAnalysis**.pdf](http://www.dtic.mil/ndia/2004cmmi/CMMIT5Tue/Root_CauseAnalysis.pdf) (slides, from which ill 7.3 made)

**presented at http://www.dtic.mil/ndia/2004cmmi/2004cmmi.html**

* URL28: **Confirmit** Case Study.

**A: The Green Week** Slides

<http://www.gilb.com/dl660>

Smidig/Agile Conference 2013 Oslo

Nov 5 2013

**B: The GREEN WEEK- Agile Technical Debt Engineering beats Refactoring.**

http://vimeo.com/78635151

Agile Oslo 2013, Video 10 minutes.

IN NORWEGIAN, English slides

C: Gilb, co author Trond Johansen **Confirmit case** paper

<http://www.gilb.com/tiki-download_file.php?fileId=32>

**D: Value Driven Project Management**

17.5MB *slides* 2008

Includes Firm Case

<http://www.gilb.com/tiki-download_file.php?fileId=152>

**E. ‘What’s Wrong With Agile Methods? Some Principles And Values To Encourage Quantification’** with Confirmit Case. <http://www.gilb.com/dl50>

* URL29: **Lean Startup Compared to the Evo method**
  + **Lean Startup** March 24 2014 Krakow ALE Slides Dec 6 2011.pptx.pdf
  + <http://www.gilb.com/dl805>
* URL30: **Tse and Kahlon: Planguage Case NHS**

Source Oct 2013 Paper

**How Planguage Measurement Metrics Shapes System Quality**

**Man-Chie Tse**1,2 **& Ravinder Singh Kahlon** 1,2

{Man-Chie, Ravi}@dkode.co

 Title of 2013 SQM paper:

the principles and application of Planguage for Managing System Innovation

<http://www.gilb.com/dl582>

Great real pharmaceutical hospital case with real improvements.

Slides <http://www.gilb.com/dl583>

1 dkode Limited, London, United Kingdom.

2 University of Ulster, Ulster Business School, Northern Ireland, United Kingdom.

**Abstract**: It is known for innovative IT projects in the public sector healthcare within the UK to fail and disappoint. The announcement of National Programme for IT (NPfIT) is an example, at a cost of £12.7 billion that ended. The problem of IT projects failing have a destructive impact on wasting resources and at the socio-economic cost to the tax payers.

The aim of this paper is to improve the understanding and inter-relationship qualities between people, process and technology. A quality healthcare innovation project was to consign new improved services and processes to be more efficient and to deliver value to the stakeholders in a competitive sector.

I emailed them 2 aug 2014 for updated references. THEY REPLIED THEYWILL GET BACK WITH UPDATES

* URL31 **HP Evo**

**A. The Evolutionary Development Model for Software**

by Elaine L. May and Barbara A. Zimmer

August 1996 Hewlett-Packard Journal

<http://www.gilb.com/tiki-download_file.php?fileId=67>

**B. Evolutionary Fusion: A Customer- Oriented Incremental Life Cycle for Fusion**

by Todd A

<http://www.gilb.com/tiki-download_file.php?fileId=35>

August 1996 Hewlett-Packard Journal

**C. RAPID AND FLEXIBLE PRODUCT DEVELOPMENT: AN ANALYSIS OF SOFTWARE PROJECTS AT HEWLETT PACKARD AND AGILENT** (2001)

by

Sharma Upadhyayula

<http://www.gilb.com/tiki-download_file.php?fileId=65>

M.S., Computer Engineering University of South Carolina, 1991

And

Massachusetts Institute of Technology

January 2001

**D. Best Practices for Evolutionary Software Development**

by

Darren Bronson

<http://www.gilb.com/dl825>

57 pages., 1999.

URI: http//hdl.handle.net/1721.1/80490

* URL32: **The Loo Watt Startup Case**

http://www.gilb.com/dl792

The Evo method with cases Loowatt, Confirmit, US DoD

For 1 hour talk #BuildstuffLT Dec 10 2013

pdf version

Project Website

[www.Loowatt.com](http://www.Loowatt.com)

* URL33 **PRIORITIZATION (SEE CHAPTER 6)**

**A. Choice and Priority Using Planguage:**

**A wide variety of specification devices and analytical tools.**

Copyright © 2006 by Tom Gilb.

http://www.gilb.com/tiki-download\_file.php?fileId=48

**B. Managing Priorities: A Key to Systematic Decision-Making**

Tom Gilb Tom@Gilb.com Mark W. Maier Mark.w.maier@aero.org

Copyright © 2005 Tom Gilb and Mark Maier. Used by Permission of the authors by INCOSE.

http://www.gilb.com/tiki-download\_file.php?fileId=60

**C. Dynamic Design Prioritization in the ‘Evo’ Agile Framework for Scrum or other Iterative Methods**

http://www.gilb.com/dl602

Slides up pdf 122 slides, for London Software Architect Conference Oct 9 2013

URL34: **Planguage Icons**

A. Plicons: A Graphic Planning Language for Systems Engineering

Copyright © 2006 by Tom Gilb. .

<http://www.gilb.com/tiki-download_file.php?fileId=37>

See also most chapters of Competitive Engineering Book [1]

B. For information about Planguage Icons. See the Glossary in the book and more extensively the extended Planguage Glossary

CE Full Glossary

<http://www.gilb.com/tiki-download_file.php?fileId=386>

A private, unpublished, even on internet, file of all proposed keyed icons, is available from the author on request.

* URL35: **QFD** BSC maybe Brodie research PhD

Gilb & Brodie (2008) **“How problems with Quality Function Deployment's**

**(QFD's) House of Quality (HoQ) can be addressed by**

**applying some concepts of Impact Estimation (IE)”**

<http://www.gilb.com/tiki-download_file.php?fileId=119>

* URL36: **Bring Case** and more: Hierarchical Impact Estimation Tables

<http://www.gilb.com/dl500>

**"Value-Driven Development: Principles and Values."**

Slides for , 50 minute talk, Software Passion Conference 20 March 2012 Gothenburg, Sweden

**Value Management**

**(Evo)**

**with Scrum development**, March 2010 English Version , Kai Gilb

[www.gilb.com/tiki-download\_file.php?fileId=277](http://www.gilb.com/tiki-download_file.php?fileId=277)

**The Inmates are running the asylum, Construx Summit talk Oct 25 2011 Seattle**

**Contains considerable Bring Case slides**

[www.gilb.com/tiki-download\_file.php?fileId=488](http://www.gilb.com/tiki-download_file.php?fileId=488)

Norwegian Version, Bring Case

[www.gilb.com/tiki-download\_file.php?fileId=279](http://www.gilb.com/tiki-download_file.php?fileId=279)

* URL37: **How Good Is A Process?**

Evaluating Engineering Processes’ Efficiency.

<http://www.gilb.com/tiki-download_file.php?fileId=51>

INCOSE Conference 2006. Tom Gilb

* URL38: Lindsey Brodie, Research Paper
  + **“Towards Understanding Multi-dimensional Stakeholder Value Using Absolute Scale Metrics”**
  + Lindsey Brodie and Mark Woodman School of Engineering and Information Sciences
  + Middlesex University London, UK L.Brodie@mdx.ac.uk
  + PUT URL HERE
* URL38: **Ramo.** same as reference to book [12] since it is both a book and a download.
  + Simon Ramo (quote in 6.5)
  + Simon Ramo and Robin K. St.Clair, The Systems Approach: Fresh Solutions to Complex Civil Problems Through Combining Science and Practical Common Sense, 1998, 150pp, © TRW, Inc., Manufactured in USA, KNI Incorporated, Anaheim CA. Free copy at TRW Stand at INCOSE conference 2002.
  + Free Download: [www.incose.org/ProductsPubs/DOCSystems Approach.pdf](http://www.incose.org/ProductsPubs/DOCSystems%20Approach.pdf)
* URL39: **Ericsson Management Policy**
  + Including Quality Policy and Risk Policy (CP 7.1 and earlier)
  + <http://www.ericsson.com/res/thecompany/docs/comp_facts/how-we-manage-our%20business.pdf>
* URL40: **Defect Prevention Process**

R Mays et al, IBM Systems Journal 1/1990, **“Experiences with Defect Prevention Process”**, DPP

<http://www.gilb.com/tiki-download_file.php?fileId=457>

<http://agileconsortium.pbworks.com/f/Mays1990ExperiencesDefectPreventionIBMSysJ.pdf>

SEI CMM Level 5

<http://www.sei.cmu.edu/reports/93tr025.pdf>

Also see Chapter 7 and 17 in Tom Gilb, Software Inspection, Book (1993) which are on the DPP method. 17 is by Mays, as above.

* URL41 **Cleanroom**

A. Mills, H. 1980. The management of software engineering: part 1: principles of software engineering. *IBM Systems Journal* 19, issue 4 (Dec.):414-420.

Direct Copy

<http://trace.tennessee.edu/cgi/viewcontent.cgi?article=1004&context=utk_harlan>

Library header

<http://trace.tennessee.edu/utk_harlan/5/>

B. Mills, Harlan D.; Dyer, M.; and Linger, R. C., "Cleanroom Software Engineering" (1987). The Harlan D. Mills Collection. <http://trace.tennessee.edu/utk_harlan/18>

C. Mills Generally

<http://trace.tennessee.edu/utk_harlan>

* URL42: **PDSA Plan Do Study Act The Deming Cycle**

Original Deming Lecture to Top Management 1950 Japan:

<http://deming-network.org/deming_1950.htm>

Evolution of the PDSA Cycle:

<http://www.cologic.nu/files/evolution_of_the_pdsa_cycle.pdf>

* URL43: **Undergraduate Basics paper. See 10.9 and 10.10**

A. Gilb, Tom, Undergraduate Basics for Systems Engineering (SE),

using The Principles, Measures, Concepts and Processes of Planguage. (INCOSE Conference 2007 Presentation)

<http://www.gilb.com/tiki-download_file.php?fileId=98>

My thesis here is that we need to educate in basics, such as principles, measurement, and concepts: to prepare people for unknown and rapid change decision making.

Paper presented at

**Academic Forum**

**INCOSE International Symposium 2007, San Diego**

**Monday, 25 June 2007**

[**www.incose.org/symp2007/documents/AcademicForum.doc**](http://www.incose.org/symp2007/documents/AcademicForum.doc)**.**

**Otherwise never published.**

* URL44: **The McDonnell-Douglas Case Study** of **SQC and Engineering Improvement**

Case DAC Inspection 1988-89 . ROI 4.5:1

Contains also Philips (UK, detail in [14] as case study) and Boeing SQC client cases. We did Boeing (Renton) after McDonnell-Douglas success and recommendation.

[www.gilb.com/dl254](http://www.gilb.com/dl254)

See also [URL23, 1 D]

* URL45: **Intel Report on SQC** (Gilb methods used here <- E Simmons)

The Impact of a Requirements Specification on Software Defects and Other Quality Indicators by john.terzakis@intel.com

**http://selab.fbk.eu/re11\_download/industry/Terzakis.pdf**

* URL46: **Intel Experience with Planguage and SQC 2011**
  + Erik Simmons, Intel, 2011, 21st -Century Requirements Engineering: A Pragmatic Guide to Best Practices, Erik Simmons PNSQC 2011 (Pacific Northwest Software Quality Conference)

http://www.uploads.pnsqc.org/2011/slides/Simmons\_21st\_Century\_Requirements\_slides.pdf

* URL47: **Statistical Process Control SPC**

A. Florac, SPC for Software, 1999 SEI, PDF).

<http://www.sei.cmu.edu/str/descriptions/spc_body.html>

CHECK THIS LINK AS MAYBE OLD, SEI HAS CHANGED

* URL48 **Secrets of Software Quality,IBM STL Study**

Slides

Secrets of Software Quality

http:\\www.iqco.com **exists2014**

**Software Quality Week**

Craig Kaplan, Ph.D.

**ckaplan@iqco.com (I emailed aug 2014)**

I.Q. Company

SeeBook citation [17]

Cited in Chapter 7.8

* URL49: **ICL Case in 8.2**

A. ICL as Wilmot took over, near collapse

<http://www.chilton-computing.org.uk/acl/associates/companies/wilmot.htm>

B. Wilmott

<http://www.zoominfo.com/p/Robb-Wilmot/247803694>

* URL50: **Jussi Aromäki**

Excellent Paper , quoted from in 8.3

Tips for successful communication with suppliers

by Jussi Aromäki on Apr 06, 2011

<https://www.ictstandard.org/article/2011-04-06/Tips-for-successful-communication-with-suppliers>

and his linkedin

<https://www.linkedin.com/pub/jussi-aromäki/1/a13/8b0>

* URL51: **ICL - Group Quality**
  + **INTRODUCTION TO QUALITY METRICS (Issue 2)**
  + Pamphlet
    - Largely authored by Tom Gilb
    - Official Corporate wide use of Planguage at ICL
    - Referenced in 8.6
    - <http://www.gilb.com/dl828>
* URL52: 25 Ways to Reward Employees (Without Spending a Dime)
  + - By **Dan Tynan**

<http://www.hrworld.com/features/25-employee-rewards/>

Referenced in 8.5

URL53: **Practical Purposeful Creativity**. Paper, T Gilb

<http://www.gilb.com/tiki-download_file.php?fileId=22>

This paper is written as an invited contribution to a book “Creativity, Innovation and Cooperation” (Springer) and a special issue of “AI & Society: the Journal of Human-Centred Systems and machine Intelligence”. The editor is Robert C. Muller Published around 1992.

URL54: **User Stories**

A. User Stories paper by Tom and Kai Gilb

In Gilbs' Mythodology Column, Agilerecord.com March 2011

<http://www.gilb.com/tiki-download_file.php?fileId=461>

**“User stories and the conversations provoked by them  
comprise *verbal communication*, which is clearer than written communication.” (Mike Cohn via Denning)**

B. Stephen. Denning, The Leaders Guide to Radical Management.

<http://stevedenning.typepad.com>

* URL55: **Murphy’s Laws, Gilb’s Laws, Gilb’s Competitive Engineering 100 Principles**

A. **Murphy’s Laws, History**

and big informal collection

<http://www.murphys-laws.com>

A2. <http://en.wikipedia.org/wiki/Murphy's_law> is better and focussed

Both give the history.

A3. <http://en.wikipedia.org/wiki/Edward_A._Murphy,_Jr>.

is the personal history of Ed Murphy, Jr.

A4. <http://people.howstuffworks.com/murphys-law1.htm>

is the best condensed story of the origin as far as Murphy is concerned.

A5. <http://www.daytoninnovationlegacy.org/murphy.html>

is another with a photo of Ed Murphy jr, and

**•"If there's more than one way to do a job, and one of those ways will result in disaster, then somebody will do it that way."** This was Ed Murphy’s own wording according to his son (*People* magazine, January 1983).

B. **Gilb’s Laws and Principles**:

by the way, at <http://www.murphys-laws.com/murphy/murphy-technology.html>

the Law

“Computers are unreliable, but humans are even more unreliable.” And “Any system which depends on human reliability is unreliable.”

Are two of Gilb’s Laws from March 1975 Datamation, paper, “The Laws of Unreliability”.

A complete set, Gilb’s Laws will be found at

<http://www.gilb.com/tiki-download_file.php?fileId=336>

and a larger summary of my principles will be found at

**Gilb 100 Planguage Principles and friends** (Gilb’s Laws and 1st photo page of original Datamation paper)

<http://www.gilb.com/dl352>

* URL56. Peanut Butter Statistics used in 9.6
  + <http://jwilson.coe.uga.edu/emt668/EMAT6680.Folders/Brooks/6690stuff/Statistics/Statistics.html>
* URL57: Planguage Rules from CE Book [1]

Planguage Rules Collection from all chapters

<http://www.gilb.com/dl829>

URL58: Mountain Rules

<http://mylittlenorway.com/2011/05/the-mountain-code/>

URL59: Car Safety Factor

<http://www.agro.basf.com/agr/AP-Internet/en/content/competences/health_and_nature/safety_first/index>

URL60: Economic Safety Factor

<http://www.dineshbakshi.com/images/break%20even%20chart.gif>

URL61: Safety Factor Theory

[*http://en.wikipedia.org/wiki/Factor\_of\_safety*](http://en.wikipedia.org/wiki/Factor_of_safety)

URL62: Balanced Scorecard

A. <http://en.wikipedia.org/wiki/Balanced_scorecard>

B. Gilb Slides ‘What is Wrong with Balanced Scorecard’. slides

<http://www.gilb.com/tiki-download_file.php?fileId=135>

* URL63: **Planguage Glossary**

A. the extended Planguage Glossary, Tom Gilb’s personal version

**‘CE Full Glossary’,** This is updated at Gilb.com periodically

<http://www.gilb.com/tiki-download_file.php?fileId=386>

B. The **Competitive Engineering** book Glossary, and the whole book outside the glossary as a source of defining Planguage terms.

* + <http://www.gilb.com//dl540>
  + edit note I am not sure I want to keep this full copy here, but I’ll leave it for the moment. In any case if I do, it might be reference (1). But it is one good way to get access to the detailed discussion of the concepts! It may even stimulate paper sales ? A discussion with LB and Publisher. But I have the rights to it all now. TG 130914
  + See the CE Handbook keyword index, for treatment and examples in the entire handbook

Paper copies available via Amazon etc.

C. **Gilb.com, Resources, Concept Glossary**

This is a voluntary team project, led by Kai, and supported byour BCS course participants, to extract the basic definitions and make them available on the live web. Easy to access in a meeting!

D. **Planguage Concept Glossary as edited in Competitive Engineering book** 2005 (10% of Full Glossary)

<http://www.gilb.com/tiki-download_file.php?fileId=387>

E**. ‘A Conceptual Glossary for Systems Engineering: Define the Concept, don’t quibble about the terms.**’

**Paper** on the Concept Glossary: 2003-2006, Held at INCOSE San Diego 2007

<http://www.gilb.com/tiki-download_file.php?fileId=46>

URL64: **Agile Planguage**. Referenced in 10.10

**‘Agile Aspects of Planguage for Cost-Effective Engineering’**, by T. Gilb & L. Brodie

Published in Agile Record magazine, January 2011

<http://www.gilb.com/tiki-download_file.php?fileId=39>

A description of the adaptability of the Planning Language to various circumstances and needs.

URL65 **Planguage Philosophy. Not referenced yet 13 sept 2014**

Planguage [Philosophy]: Background depth for teachers, consultants and the curious (from 1995)

<http://www.gilb.com/dl822>

* URL66: **Security Definition** 
  + **‘How to Quantify Security’** by Tom Gilb. Ref. 10.10

http://www.gilb.com/tiki-download\_file.php?fileId=40

* URL67: CONTINUOUS IMPROVEMENT edit, I need to insert this somewhere
  + A. SEE ALSO URL40 DPP
  + B. Masaaki Imai - Definition of KAIZEN
  + https://www.youtube.com/watch?v=jRdTFis4-3Q
    - Courtesy of [Venkatesh Krishnamurthy](http://www.blogger.com/profile/11471239057569635943)
    - <http://agileworld.blogspot.com>
* URL68: Kai’s Tool for Planguage

A. Kai Gilb’s Google Docs, Excel Spreadsheet tool

Reference to be supplied

In the meantime send info requests to Kai at Gilb . com

B. Kai Gilb’s New Tool developed for Statoil 2014.

Reference to be supplied

URL69: Helmuth Karl Bernhard Graf[1] von Moltke

<http://en.wikipedia.org/wiki/Helmuth_von_Moltke_the_Elder>

I found a detailed read of his history and thinking to be well worth the time invested.

* **F1**. R e the Philips Evo delivery Illustrations
* **F2**. RE Tesla Dealership Fight
  + http://www.forbes.com/sites/jeffreydorfman/2014/03/22/free-markets-tesla-battles-car-dealers-over-right-to-sell-cars/
    - The GxxLine PXX Optimizer EVO team proudly presents the success of the Timing Prediction Improvement EVO steps.
    - Shown are the results of the test set used to monitor the improvement process.
    - The size of the test set has grown, as can be seen in the first column. (In the second column the week number is shown.)
    - We measured the quality of the timing prediction in percentages, in which –5% means that the prediction by the optimizer is 5% too optimistic.
    - Excellent quality (–5% to +10%) is given the color green, very good quality is yellow, good quality is orange, & the rest is red.
    - Eindhoven 2001
    - The results are for the ToXXXz X(i) and EXXX X(i), and are accomplished by thorough analysis of the machines, and appropriate adaptation of the software.
    - The GXXline Optimiser Team presented the word document below to the Business Creation Process review team.
    - The results were received with great applause. The graphics are based on the timing accuracy scale of measure that was defined with Jan verbakel. Classification: Unclassified
* **F3**: Fuller quote from Robin Olds, in book Fighter Pilot
  + “Here’s what I learned over the years.
  + Know the mission, what is expected of you and your people.
  + Get to know those people, their attitudes and expectations.
  + Visit all the shops and sections.
  + Ask questions. Don’t be shy.
  + Learn what each does, how the parts fit into the whole.
  + Find out what supplies and equipment are lacking, what the workers need.
  + To whom does each shop chief report? Does that officer really know the people under him, is he aware of their needs and training?
  + Does that NCO supervise or just make out reports without checking the facts? Remember, those reports eventually come to you.
  + Don’t try to bullshit the troops, but make sure they know the buck stops with you, that you’ll shoulder the blame when things go wrong.
  + Correct without revenge or anger.
  + Recognize accomplishment.
  + Reward accordingly.
  + Foster spirit through self –pride, not slogans, and never at the expense of another unit.
  + It won’t take you long, but only your genuine interest and concern, plus follow-up on your promises, will earn you respect. Out of that you gain loyalty and obedience. Your outfit will be a standout. But for God’s sake don’t ever try to be popular! That weakens your position, makes you vulnerable. Don’t have favorites. That breeds resentment. Respect the talents of your people. Have the courage to delegate responsibility and give authority to go with it. Again, make clear to the troops you are the one who’ll take the heat.”
  + There is a passage just above this
  + “ …respect, leaders like Dooey Spatz, Jimmy Doolittle, and many more. They all connected with their troops on a personal level and learned everything they could about every part of the organization”
* **F4**: More from my source of Gruehl chart, NAS in 2.2 and 7.7

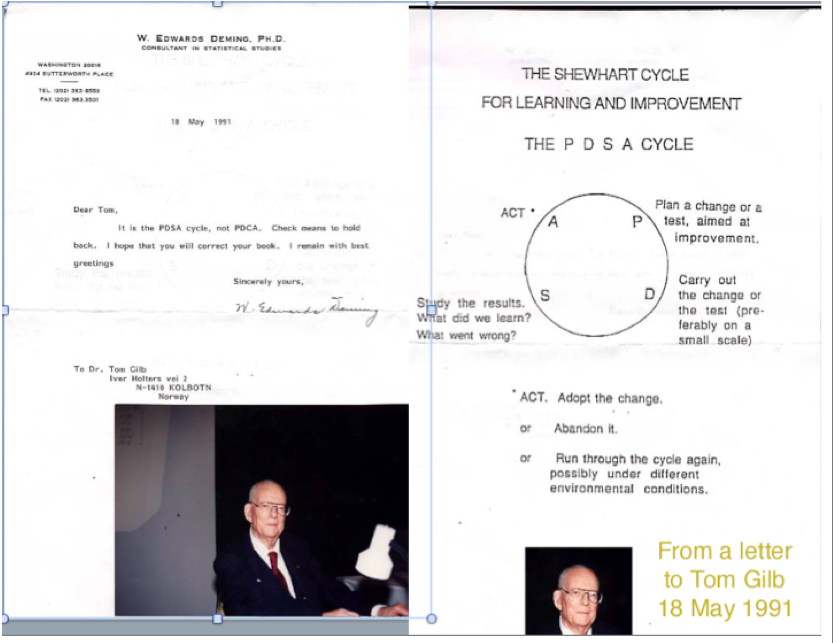
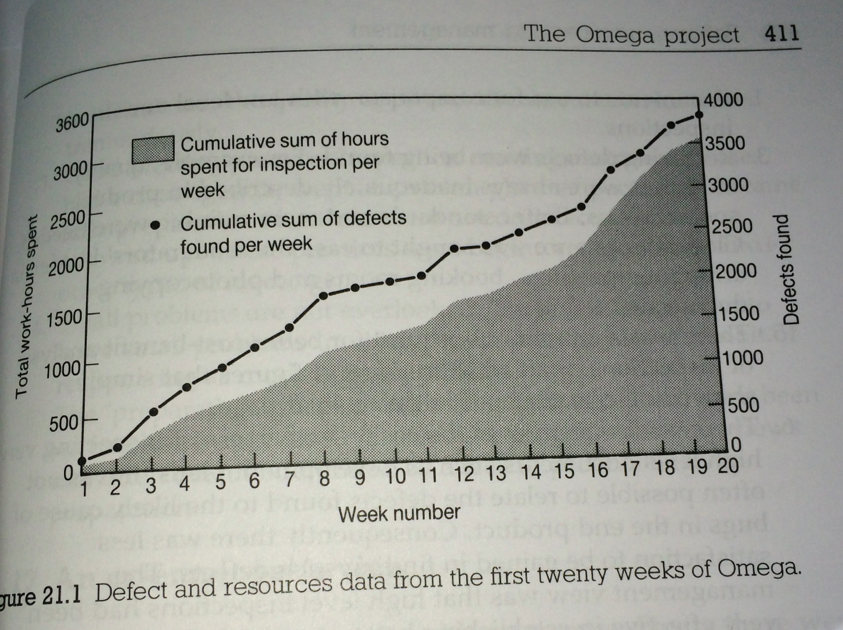
SOURCE IVY HOOKS AUG 2002, original SOURCE NASA

www.complianceautomation.com

Tom, “Here is my other story:

A client of mine had many data points on software projects that could be evaluated like the Gruehl chart. While there was a lot of scatter and some of the projects actually came in under cost and on schedule, an interesting pattern emerged. Overruns for upgrades were much more severe, twice as large or more, than for new projects. The manager who had the data contributed this to the problem of doing an upgrade assuming that it was simple, only to find major problems once the work had begun. This he attributed to lack of documentation of the existing system and lack of access to anyone who had built it, thus no knowledge of what was inside.

Cheers Ivy”

* + *Customer-Centered Products, Creating Successful Products through Smart Requirements Management,* Ivy Hooks and Kristin A. Farry, Amacom, 2001
* **F5**: Deming
  + About 1984 in London, Tom had the pleasure of a week long class (with 600 other people) with Dr. Deming. I even managed to take him to the Leningrad Ballet, visiting London, after class was over! At the end of the week, I tried, for fun to see if I could summarize all his profound wisdom that week in a purely pictorial diagram. My diagram looked very much like the diagrams 7.8 A&B (Control charts, showing improved performance and reduced variance). “Is this the message? Is this the essence?” I asked him. I got a clear ‘Yes’ answer to that. Dr. Deming was quite minimalistic. For his one week class he had only one slide: his 14 points!
* 
  + The photographs were taken in our classroom, on that course. He was 84,and still going strong! His last lecture was done a week before he died peacefully ten year later. I liked his style: it was about sharing ideas, and making the world a better place. [URL42, re PDSA]
* **F6**: Tesla
  + **The author has been happily driving our Tesla Model S from December 2013**. What a delight! Musk keeps on giving extra guarantees (drive train, 8 years, Summer 2014) after the fact, free Superchargers, after the fact, monthly updates of the car driving, safety, entertainment etc. characteristics, constant improvement; after we paid for the car! And the car is initially ‘perfect’ anyway! He really practices this relentless improvement, not just for future products, but for ‘old’ customers.
* **F7. Wilmot and Books, and the half life of ideas and principles**
  + Wilmot remarked to me one *“I never read books, they are bound to be out of date, in these fast moving times” [F7] in 8.2*
  + In 1960 my sister Wendy Bartlett arrived in Norway bearing a book by Jevons, The Principles of Science (Dover edition). She had it as a textbook from Berkeley University. I thought it was strange to see at the Steam Engines in the book, until I say it was a reprint from 1874 earlier.
  +  <http://en.wikipedia.org/wiki/William_Stanley_Jevons>
  + and
  + <http://history-computer.com/ModernComputer/thinkers/Jevons.html>
  + This inspired my future work and books. I keep on searching for principles and other long term knowledge, that never went out of style. I hope the reader appreciates this; and realizing that the tools in this book, not least the Principles, are intended to wax eternal, and help the reader in the rest of their career and life.
* **F8**: **ICL Inspection. Alan Brown**
  + Chapter 21 in PoSEM book [5 D]
    - 
    - This is one example of the Grass Roots work I was asked to do by the top management of ICL. It is using the Specification Quality Control method (aka then as Inspection). They are removing about 400 defects, at a cost of 1 hour each. The downstream cost of removal, in testing or the field with customers is about 10x that.
* **F9: On the ‘quotation’, ‘It is difficult to estimate correctly, especially about the future’. In 9.4**
  + There are many variations and attributions of this.
  + <http://chaosbook.blogspot.no/2010/06/lundskovdk-citater.html?m=1>
  + Niels Bohr, and Yogi Berra among them.
  + Sources point back to Denmark and Norway in 1918
  + But just to be on the safe side, I wrote my own unique variation, using *estimate* and *correctly*, so that variant can be attributed to Tom Gilb, 2014. With a nod to Bohr and his Danish sources.
* F10. Eleanor Roosevelt (1884-1962)
  + For more very pithy wisdom from ER.
  + <http://www.goodreads.com/author/quotes/44566.Eleanor_Roosevelt>
  + PHOTO SOURCE
  + <http://en.wikipedia.org/wiki/Anna_Roosevelt_Halsted#mediaviewer/File:Eleanor_Roosevelt,_Anna_Roosevelt,_and_John_Boettiger,_Jr_-_NARA_-_195584.jpg>
  + I could not resist this photo, after choosing the wonderful ER quote. John Boettinger, Jr. is a friend of the author, as we met, as teenagers crossing the Atlantic in a ship in Summer 1956. I got off at Southampton, UK, but he and his cousin went on to Holland, and the next day in the *New York Herald Tribune*, front page, there were the boys, cruising the Amsterdam Canals with the Grandmother! It has been a pleasure to renew that friendship in Norway and California.
* F11: **Alan Bartlett Shepard**
  + Bartlett is my mother’s father’s family name. Ruth Bartlett, and we proudly are related to Josiah Bartlett who signed the Declaration of Independence. We were amongst the earliest Settlers (invaders?) I have a son who chose Per Bartlett, and a sister Wendy Bartlett. So I guess, without researching it, that Alan Bartlett Shepard and I are somehow distantly related. Perhaps this explains my independence of thought?
* F12: Roald Amundsen Statue & Airplane.

A. This statue of Roald Amundsen is 4 minutes walk from my home in Norway. I pass it daily, on the way to a shop of the train or bus to Oslo. Amundsen was a local hero, and lived nearby, say 15 minutes drive from me. He gained the admiration of local boys by skiing that distance (maybe 10 km?) from his home in Svartskog to Kolbotn train station, behind the statue, for his daily trips to Oslo. My grandchildren go to the local Roald Amundsen school.

B. The airplane photo.

Roald Amundsen and N-25 near the North Pole, in 1925.

Photo is public property.

Photographer: Anders Beer Wilse (1865–1949) - Galleri NOR Collection Number: NF.WA 03026

C. Plane lent from French, ‘Latham 47’, Roald Amundsen 1928, This is shortly before takeoff from Tromsø, Norway on his ill fated mission.

Photo is public property Conditions.

Photographer: Anders Beer Wilse - Galleri Nor

Collection Number: NF.WB 48692

D. “Right away.”

Amundsen’s answer when asked if he would participate in the attempt to find Nobile.

E. other Amundsen quotes in English

<http://en.wikiquote.org/wiki/Roald_Amundsen>

including

* + I may say that this is the greatest factor — the way in which the expedition is equipped — the way in which every difficulty is foreseen, and precautions taken for meeting or avoiding it. Victory awaits him who has everything in order — luck, people call it. Defeat is certain for him who has neglected to take the necessary precautions in time; this is called bad luck.

— from The South Pole, by Roald Amundsen

* F13: Case Study, Thorn EMI, Trevor Reeve
  + Based on Chapter 14, Software Inspection (14) book, 1993
  + Company Name History: MEL (Mullard Electric Limited) was part of Phillips UK until taken over by Thorn EMI Radar in the early 90's. Comment about the work Reeve started in MEL continued in Thorn EMI Radar until 1994 when he left the company.
  + Trevor can be contacted at: [trevorreeve@mail.com](mailto:trevorreeve@mail.com)
  + 
* F14. Deming
  + . He gave me a copy of his 1950 book, ‘Some Theory of Sampling’, in 1994.
  + 
* F15. ***Christopher Strachey****. Referenced in 10.9, 10.10*
  + ***Here is my initial inspiration for these ideas:***
  + *Christopher Strachey (Oxford) : “*Computing science has been under some attack on the grounds that it isn’t software engineering. I propose to attack it on different grounds. I think we should seriously ask ourselves the question: is computing science?
  + Recently I did a small survey as to whether computing is suitable as an undergraduate subject in an English university. I did this by grading all the topics I could think of under the headings of relevance and state of development. **The premise is that it is clearly wrong to teach undergraduates the state of the art; one should teach them things which will still be valid in 20 years time: the fundamental concepts and underlying principles. Anything**
  + **else is dishonest.**
  + The gradings for relevance ran from “clearly relevant and essential” to “part of another subject” (like numerical analysis) and those for state of development from “well developed with theorems, laws and text books” to “a fruitful field for research”. Note, incidentally, the importance of text books. They are designed to be taught from; they are quite different from treatises and even further from research papers. Now, it turned out that all those subjects which score highly for relevance score very low on state of development and vice versa.
  + Until we have a sufficient body of topics which are important, relevant and well developed we cannot call the subject a “science”. I am quite convinced that in fact computing will become a very important science. But at the moment we are in a very primitive state of development; **we don’t know the basic principles yet and we**
  + **must learn them first.** **If universities spend their time teaching the state of the art, they will not discover these principles and that, surely, is what academics should be doing.**

I do not for a moment underestimate the importance of the state of the art in engineering. Clearly it is essential and furthermore from engineering practice we must get our experience and material from which we develop theory**. But, before teaching students we must get our basic principles right. [Strachey 1969]**

Strachey 1969:

<http://homepages.cs.ncl.ac.uk/brian.randell/NATO/nato1969.PDF>

* + Software Engineering, Proceedings, page 65
  + Bio & Photo
  + <http://www.cs.man.ac.uk/CCS/res/res43.htm#e>
* F16. **William A. Foster. Quoted in 2.3**

[**Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skillful execution; it represents the wise choice of many alternatives.**](http://www.quotationspage.com/quote/9312.html)

**Quoted in 2.3**

**William A. Foster**

[**http://www.mastercontrol.com/newsletter/quality-inspiration.html**](http://www.mastercontrol.com/newsletter/quality-inspiration.html)

**“When an initial Google search didn't turn up anything significant except for a wiki on a military-related William A. Foster, I got really dedicated and clicked over to page two of the search results. I found a Google research thread looking for the same information, with conclusions drawn that indicated the first noted observation came from an advertisement in the June 10th, 1939 edition of the New York Times. Since no other source can be found, the conclusion is that the advertising agency came up with it, which makes sense to me considering the quality of the content itself. As profound as the statement is, a solid assumption would be that someone in QA came up with it! As for the context, I can't argue with this choice as a favorite. Whoever William A. Foster was, if it even was William A. Foster, the idea that quality requires high intention is inarguable. As a general misconception, I've noted only those within the quality profession know of the true level of ‘sincere effort, intelligent direction and skillful execution’ that those committed to the industry put into their work each day.”**

* F17. Source: Peter Drucker , "Management" (Heinemann, 1975) , Cited in Gilb PoSEM book 1988 [5]. Quote 2.9 B.
* Dedication
* To Solveig Grethe Schjelle Gilb
* Who deserves to have this book dedicated to her, since she happily is planning to put up with me when I am writing it, and when I am not!