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Battle Against Any Guess

Alex Gorbachev

12 March, 2013

New York, NY

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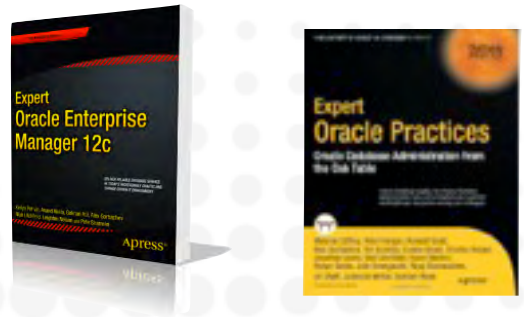
Alex Gorbachev

ORACLE RACSIG

Sydney ORACLE Meetup

- Chief Technology Officer at Pythian
- Blogger
- OakTable Network member
- Oracle ACE Director
- Founder of BattleAgainstAnyGuess.com
- Founder of Sydney Oracle Meetup
- IOUG Director of Communities
- EVP, Ottawa Oracle User Group



ORACLE ACE Director

OakTable.net

IOUG independent oracle users group

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Why Companies Trust Pythian

- Recognized Leader:
  - Global industry-leader in remote database administration services and consulting for Oracle, Oracle Applications, MySQL and SQL Server
  - Work with over 150 multinational companies such as Forbes.com, Fox Interactive media, and MDS Inc. to help manage their complex IT deployments
- Expertise:
  - One of the world's largest concentrations of dedicated, full-time DBA expertise.
- Global Reach & Scalability:
  - 24/7/365 global remote support for DBA and consulting, systems administration, special projects or emergency response

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FOX SPORTS

MySQL Enterprise Authorized Platinum REMOTE DBA SERVICES PARTNER

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BAAG Party - Battle Against Any Guess

search blog archives

Home of the BAAG Party

About

This is the new born BAAG party - Battle Against Any Guess. Guesswork should not be in the problem-solving toolbox.

You are currently browsing the BAAG Party - Battle Against Any Guess weblog archives.

#BAAG on Twitter

The Statspack for PostgreSQL — Meet Pgstatspack

2 Comments Published by Alex Gorbachev May 31st, 2008. in Uncategorized

Frits Hoogland came up with a very interesting project — Pgstatspack.

What can be better than a Statspack-like tool an Oracle DBA in the PostgreSQL world? Heh… right — only PostgreSQL Wait Interface. Oh well, Pgstatspack is a good start. Well done Frits!

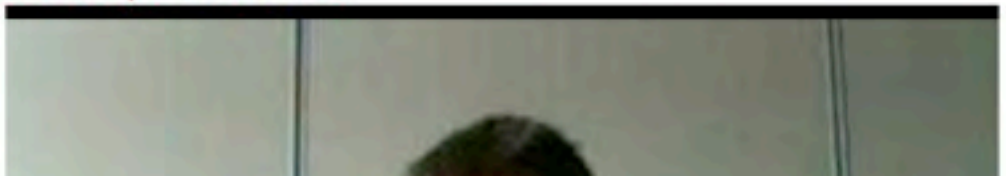
Find more about performance PostgreSQL Statspack tools

SQL Server Performance Diagnostic — Still Guessing?

3 Comments Published by Alex Gorbachev May 24th, 2008. in Uncategorized

Well, the guess-days might be just about over for SQL Server DBA's. People who revolutionized Oracle performance tuning several years ago, are now working at SQL Server revolution.

Look what Anjo Kolk had to say about at the interview during Miracle SQL Server Open World 2008:



MySQL

- Baron Schwartz
- Peter Zaitsev
- Pythian Blog (MySQL)

Oracle

- Anjo Kolk
- ASH Masters
- Cary Millsap
- Daniel Fink
- James Morle
- Jonathan Lewis
- Mogens Nørgaard
- Niall Litchfield
- Pythian Blog (Oracle)
- Tanel Poder
- Tom Kyte

PostgreSQL

- Pgstatspack

Why BAAG?

- IT systems complexity is growing fast
- Knowledge base is growing fast

- Internet makes it easy to seek and provide advise

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It's all his fault!

Momma always said I wuz gud wif
them thar kompooters.

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What Do We Do Wrong?

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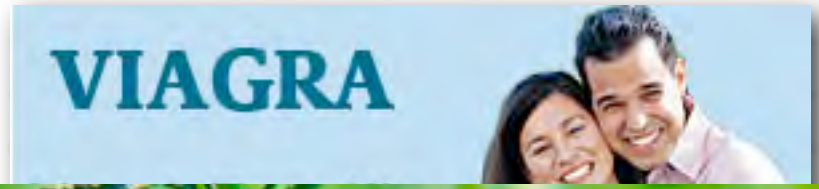
Asking Wrong Questions

I'm also having performance issues with 10g. Why would my dictionary queries take a long time to return? ... In 9i they used to take seconds, now they take minutes or they ju never come back



atabase
5.0, af
ion to

racle 1
B to a Test DB, here I'm done with
3-1-10 and it is still running. My
t takes this much time to run???

please help me...!!

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Asking for Silver Bullets!

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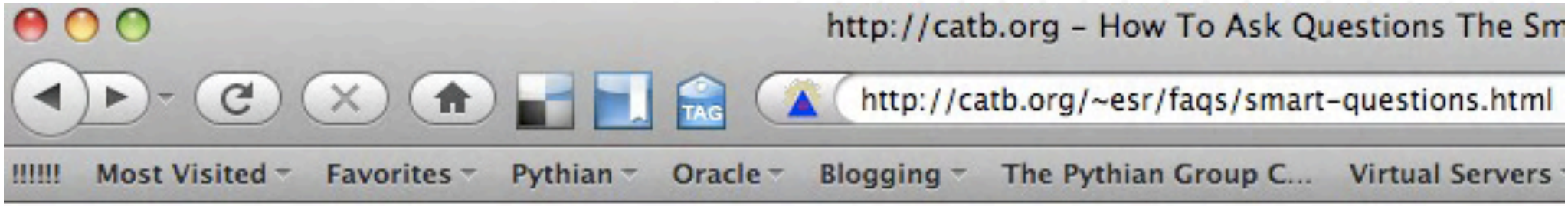
How To Ask Questions The Smart Way



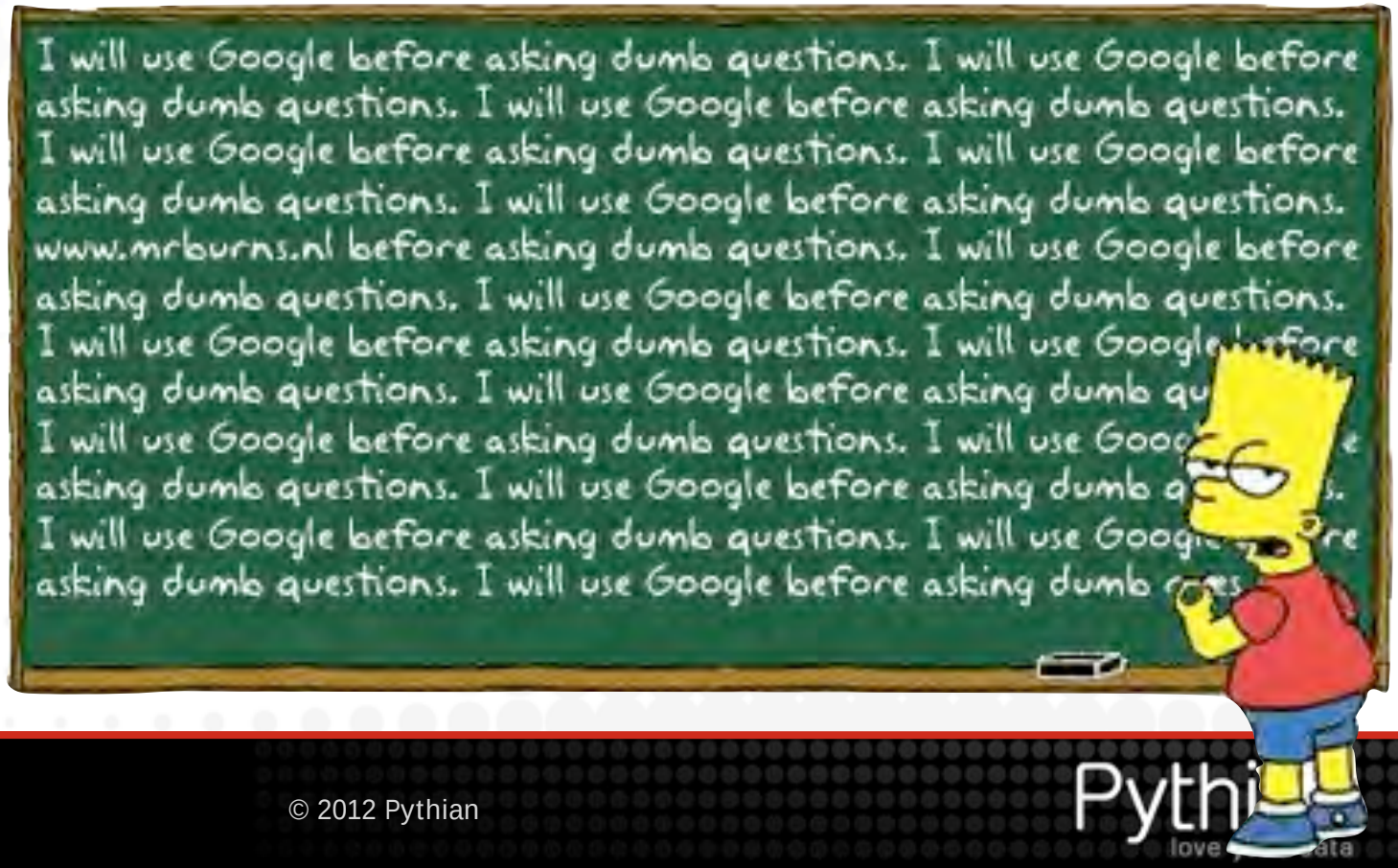
How To Ask Questions The Smart Way

Eric Steven Raymond

Thyrsus Enterprises

<esr@thyrsus.com>

Rick Moen



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Why Guess When You Can Know?

Cary Millsap

My web log for things that professional software developers, performance analysts, or founders of companies might find interesting.

MONDAY, JUNE 9, 2008

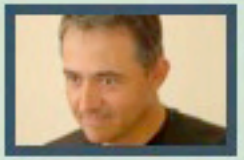
Why Guess? When You Can Know

The comment from pladys on my post about flash drives and databases is a great entry into exactly the right conversation to be having. He wrote:

> What about Data Warehouse type databases? Lots of full table scans, less use of cache (not sure if that's true)...

The traditional approach to having this conversation is for a few enthusiastic participants to argue over what happens "most of the time" or what "can happen." I used to participate in conversations like that at

About Me



Cary Millsap

Oracle performance specialist since 1989, author of "Optimizing Oracle Performance" (O'Reilly), founder and president of Method R Corporation.

View my complete profile

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Because... Being Lazy

Because... Time Pressure

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Because... Call For Action From Above

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Because... Extreme Pressure

"To address this mistake we must use root-cause analysis. I'll begin by saying it's not my fault."

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Apollo 13

"Let's work the problem, people.
Let's not make things worse by guessing."

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Understanding the Problem

Dear Miriam,

LETTER OF THE DAY

The other day I set off for work, leaving my husband in the house watching the TV as usual.

I hadn't gone a hundred yards down the road when my engine conked out and the car juddered to a halt. I walked back home to get my husband's help. When I got home I found him in the bedroom. I couldn't believe my eyes. He was parading in front of the wardrobe mirror dressed in my underwear and high heel shoes, and he was wearing my make up.

I am 32, my husband is 34 and we have been married for 12 years. When I confronted him, he tried to make out that he had dressed up in my lingerie because couldn't find any of his own underwear. But when I asked him about the make up, he broke down and admitted that he has been wearing my clothes for six months. I told him it had to stop, or I would leave him.

He was made redundant from his job six months ago, and he says he has been feeling increasingly depressed and worthless. I love him very much, but ever since I gave him the ultimatum, he has become increasingly distant, and I don't feel I can get through to him any more. Please can you help?

Mrs B, Essex

Miriam says... A car stalling after being driven a short distance can be caused by a variety of faults in the engine. Start by checking that there is no debris in the fuel line. If it is clear, check the jubilee clips holding the vacuum pipes onto the inlet manifold. If none of these approaches solves the problem, it could be that the fuel pump itself is faulty, causing low delivery pressure to the carburettor float chamber.

MIRIAM'S ADVICE LINES 0898 100--

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If it's Monday and it's raining, performance sucks!

The story borrowed from Tom Kyte

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What's behind a successful consultant?

- Understand the problem statement
  - Ask stupid questions if needed
  - Restate the problem and confirm that it's the the issue to work on
- Gather facts
  - Don't trust client's conclusions
    - Though, don't piss the client off with that!
  - Don't accept any excuses that something can't be done to collect diagnostics info
  - Get hands on; simulate if needed
- Keep diagnosing until it's clear what's going on
  - Verify diagnosis especially if "educated guess" is involved

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Efficiency vs. Effectiveness

Efficiency is doing things right; effectiveness is doing the right things. -Peter Drucker

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Stabbed at Costume Party in SF

- "no big deal" - check bowel not injured + sew up the gap
  - stable
  - breathing norm
  - no pain - just
  - head-to-toe ation; t ch red of fat tongued out
- Suddenly - stopped bubbling, hea rolled, he stopped respond ng
  - blood pressure was barely noti eable - emergency release blood in hi -> STILL NO BLOOD PRESSURE
  - "Oh shit!" moment - now it was a real emergency

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Forgot To Ask About The Weapon!

Bayonet in San Francisco?

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Unexpected Asystole

- Middle of cancer removal operation
- Suddenly flat line on the monitor
  - lead fallen off?
    - no -> the heard did indeed stop
  - started chest compression
  - asystole mid-operation? must be massive bleeding!
    - but there was none
  - lack of oxygen?
    - nop - tried oxygen at 100% & no lung problems
- Error - anesthesiologist has given 100 times higher dose of potassium

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Why Do We Fail?

- "Necessary fallibility" - some things are beyond our capacity (philosophers Gorovitz & MacIntyre)

- There are many realms where control is within our reach - build bridges & skyscrapers, stop heart attacks, cure stab wounds, solve Oracle performance problems. But we still fail…
  - IGNORANCE - we might only have partial understanding
  - INEPTITUDE - knowledge exists but we fail to apply it correctly

- Balance is shifting from failures driven by ignorance to failures caused by ineptitude.

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Checklists - From Pilots to Surgeons

The Checklist Manifesto

How to Get Things Right

- Learn about power of simple checklist and dramatic results
- Learn about failed checklists
- Learn how pilot checklist concepts applied to operating rooms

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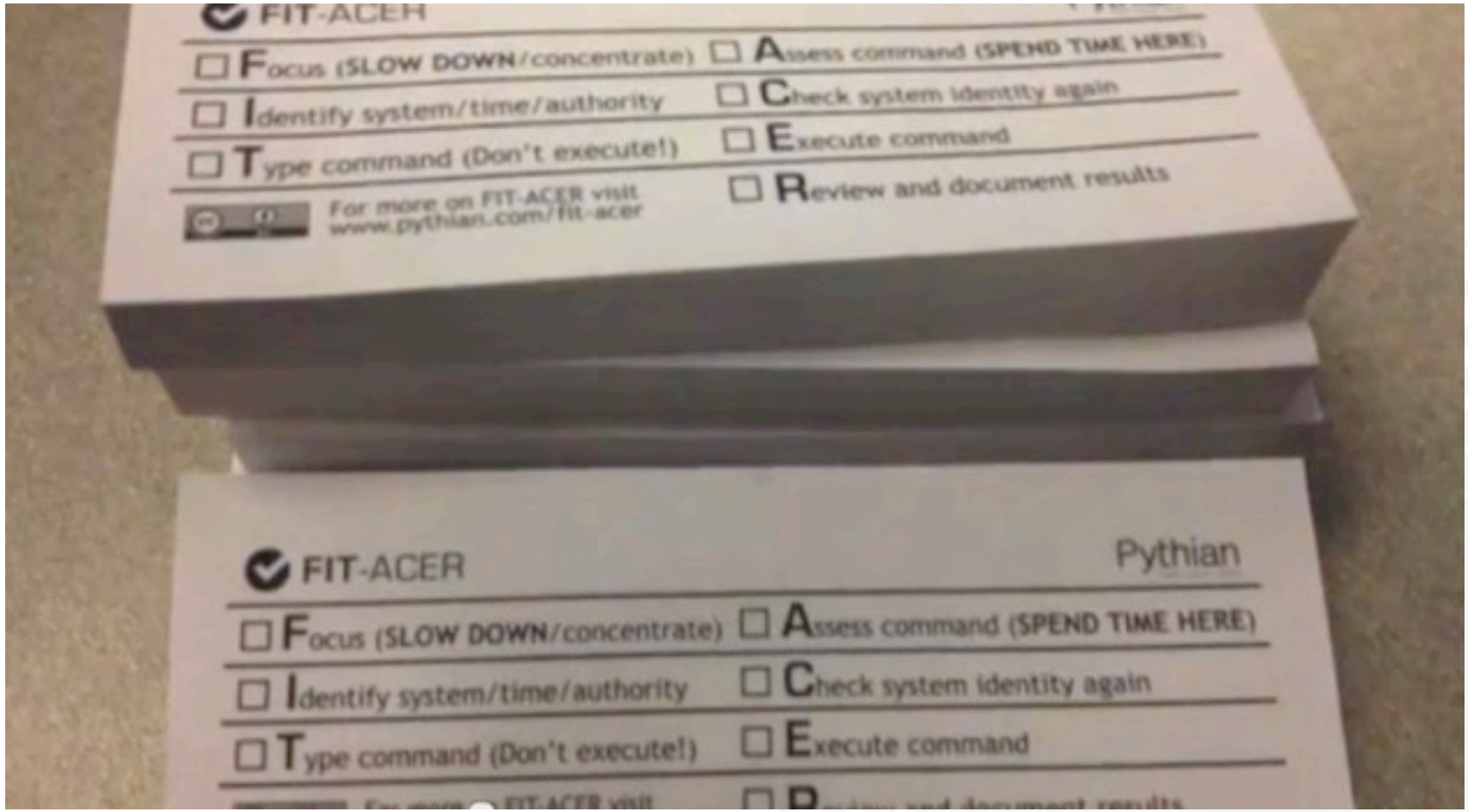
FIT-ACER - Human Reliability Checklist for DBAs



http://www.youtube.com/watch?v=iASrq6HT0Kk

http://www.pythian.com/resources/dba-resources/fit-acer-dba-checklist/

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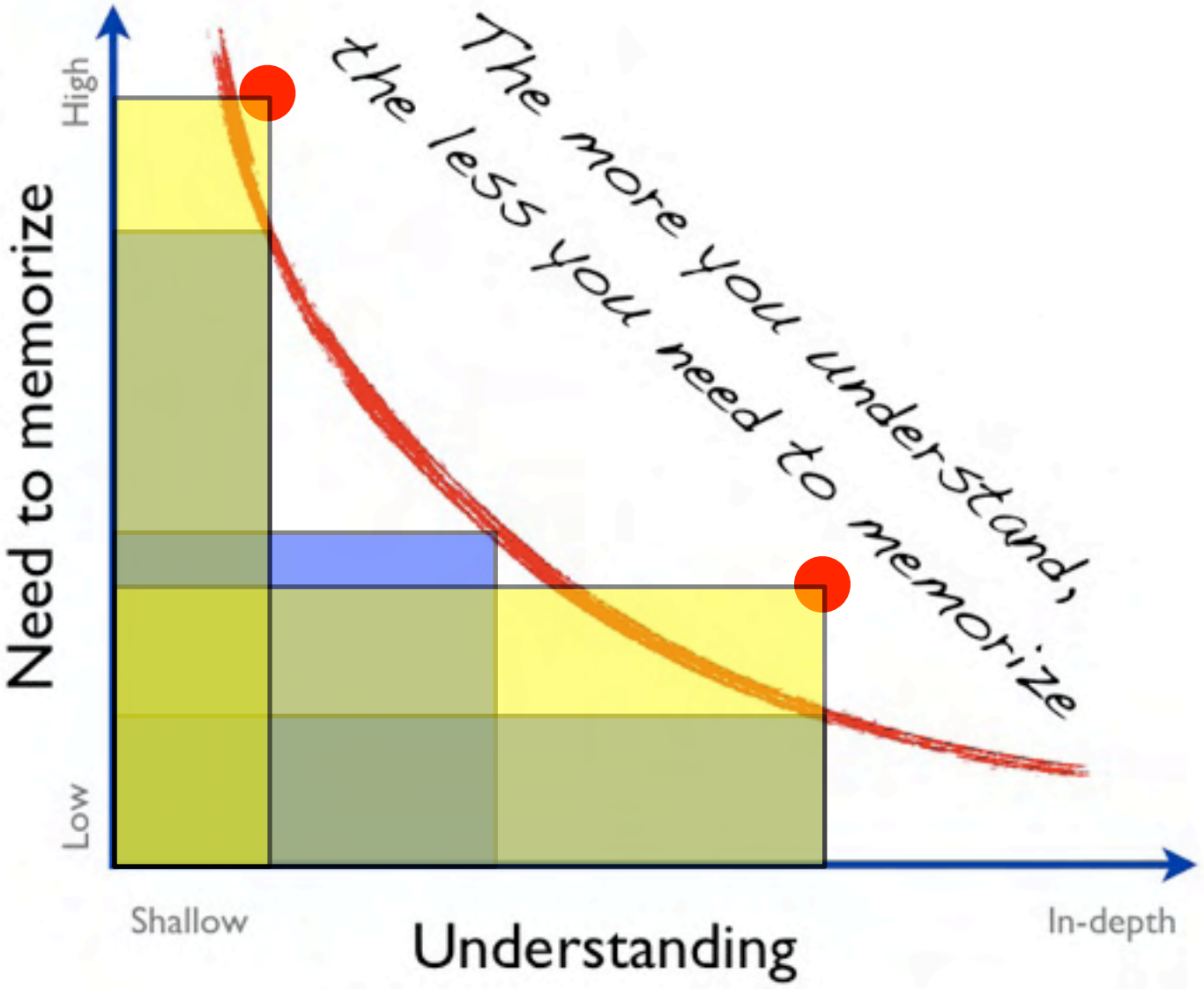
Checklists & Processes:
Who Benefits More - Thinkers or Memorizers?



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Facing the Unknown - Excuse For Guessing? (aka Educated Guess)

- Straightforward logic, top-down, deductive logic
  - We have general knowledge
  - No gaps in our understanding
  - Applying general knowledge to particular situation
  - Example - Method-R is all about deductive logic
- Inductive logic, bottom-up
  - We don't have enough general knowledge
  - We start with a particular observation
  - We formulate a hypothesis - new general theory
  - Next… deduction exercise to verify the new theory

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Paradigm Shift

- Earth as the center of the universe
  - Paradigm shift -> realization that neither Earth and not even the sun are the center of the universe
- Stephen Covey's story from The 7 Habits of Highly Effective People
  - Boys in the train gone wild
- Paradigm shift in database performance
  - "Optimizing Oracle Performance" by Cary Millsap and Jeff Holt.
- Lesson? Do regularly question general theory and…
- … be prepared to fail!

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Experiment Failure – Synonym For Success Story of Two Astronomers at Bell Labs

- In 1964, Arno Penzias & Robert Wilson built an ultra-sensitive cryogenic microwave Receiver.

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Experiment Failure – Synonym For Success Story of Two Astronomers at Bell Labs

- It was too sens
  - Isotopic noise ->
- Man made nois

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Experiment Failure – Synonym For Success Story of Two Astronomers at Bell Labs

- It was too sensitive an picked up lots of noise
  - Isotopic noise -> they assumed it must be terrestrial
- Fallout from recent nuclear bomb test in upper atmosphere?

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Experiment Failure – Synonym For Success Story of Two Astronomers at Bell Labs

- It was too sensitive an picked up lots of noise
  - Isotopic noise -> they assumed it must be terrestrial
- Pair of pigeons roosting in the narrow part of the receiver?
  - trail of “white dielectric material”

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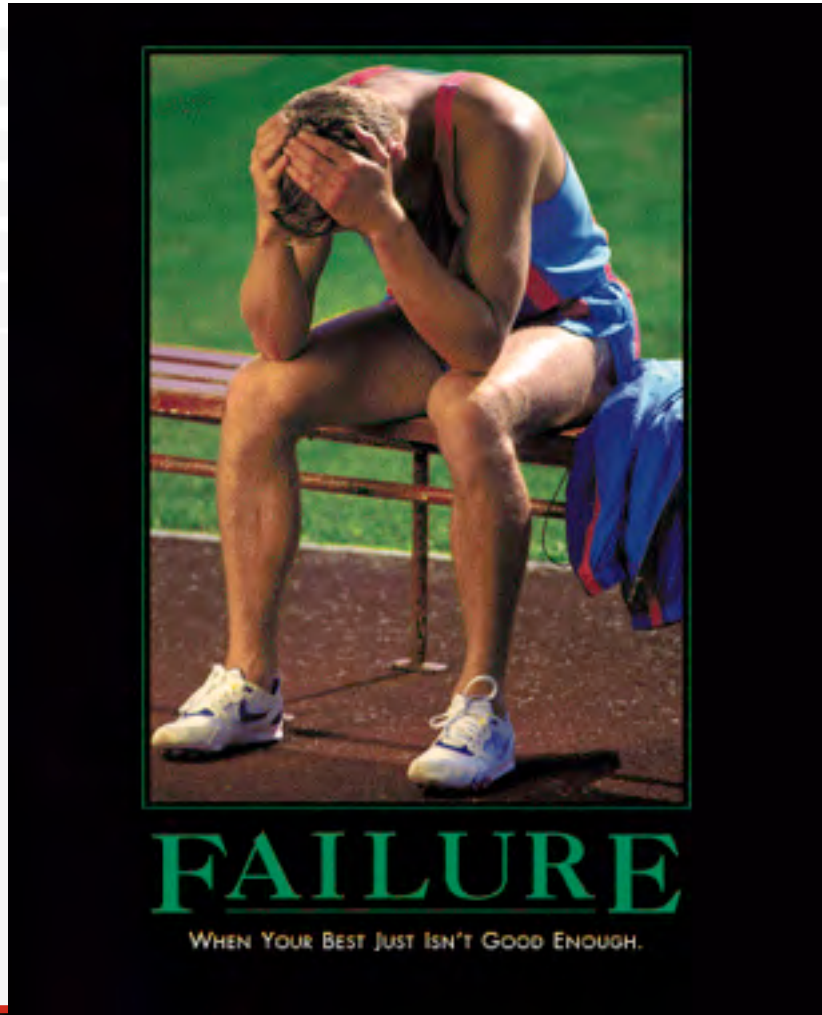
Experiment Failure – Synonym For Success
Story of Two Astronomers at Bell Labs

- It was too sensitive an picked up lots of noise
- Seemed like a total failure!



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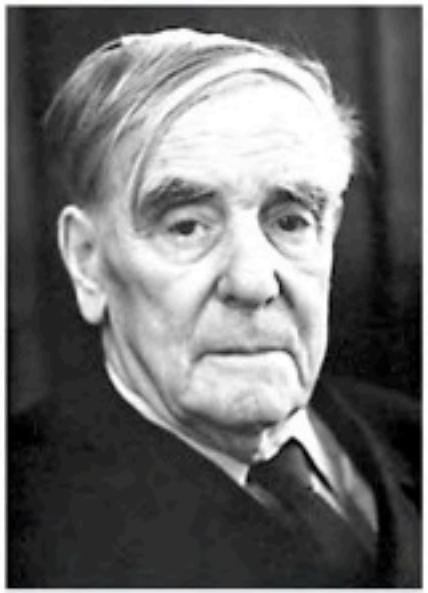
The Nobel Prize in Physics 1978

"for his basic inventions and discoveries in the area of low-temperature physics"

"for their discovery of cosmic microwave background radiation"



Pyotr Leonidovich Kapitsa

◑ 1/2 of the prize

Arno Allan Penzias

◔ 1/4 of the prize

Robert Woodrow Wilson

◔ 1/4 of the prize

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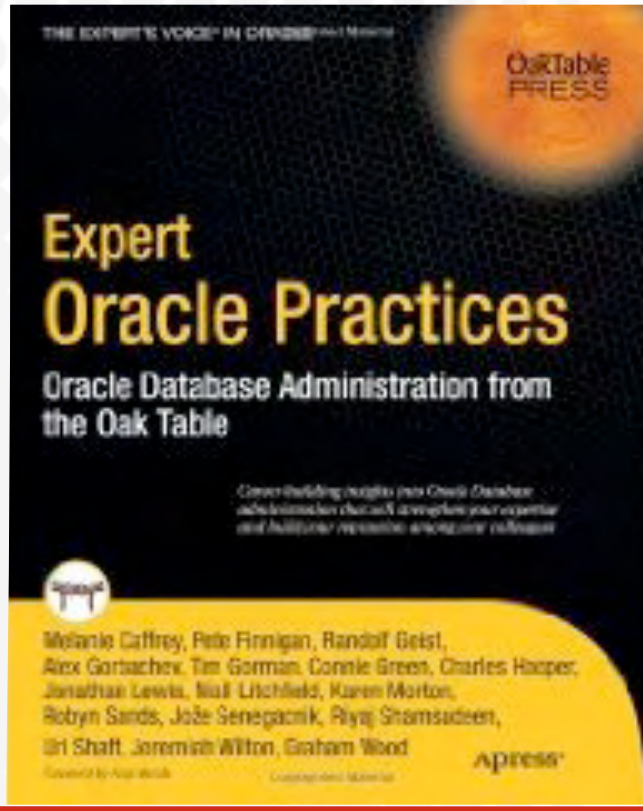
More in Chapter 1

- Logical Conclusions vs. Historical Observations
- Nonsense Correlation
- Knowledge Is Power
- RTFM
- Experience Is Danger
- Fixing the Root Cause?
- Best Practices and Myths



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Thank you Q&A

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