

Testing Missions in Context:

From Checking to Assessment

Created for:

A European conference
on context-driven testing
- for testers, by testers.

The core mission of Let's Test is to help build an active community in Europe of software testers that either identify themselves with the context-driven school of software testing or are interested in learning more about it.



Let's Test 2012

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Åkersberga
Stockholm, Sweden

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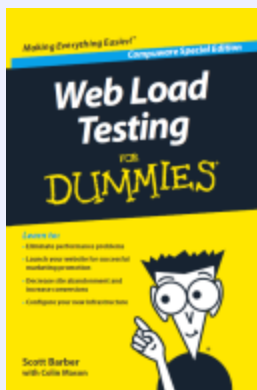
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Experiential Drivers For This Talk

Teacher's Child

Good Enough, Good, Best; Question the Answer

BS Civil Engineering:

Systems Thinking; Design of Experiments, Testing & Inspections;
Project Management; Regulatory Compliance

U.S Army Officer:

Management of Things; Skills, Tasks, Roles & Missions;
Responsibility, Accountability & Leadership

Information Engineer:

Real Value, Business Modeling, Operational Efficiencies

MS Information Technology:

Tech Management/Leadership

Business Owner/Executive Consulting:

Value, Business Decision Drivers, Expectations

Incoming Transmission

TOP SECRET

Good morning Scott,

This just in from "The PM":

Your mission, should you choose to accept it, is to test a website on desktop, tablet, and mobile platforms, across all modern browsers to ensure operational and visual consistency compared to the baseline IE9 deployment and to provide a detailed report of all discrepancies. Any discrepancies found in production will be blamed entirely on you.

Do you accept this mission?

Yes

No

What Was **That** All About?

Not so different than client calls:

Problem to solve *not revealed*

Solution *presumed*

Value for cost *questionable* (at best)

Highlights common perception of the tester's role:

Unfortunately necessary

To mechanically *check* against expectations

To be held *accountable* for “bad stuff”...

Without being *responsible* for “good stuff”

Not seen as a “real” *stakeholder*

Epic Fail as a Mission:

That was a *task*, not a *mission*.

Agenda

Exploring the Power of Missions:

My experience: Task Complete => Epic Mission Fail
Translating that experience into “tester-speak”

Near Ubiquitous Context-Driver:

Businesses pay for testing
Business Value == Good Testing

Purpose, Role, Assignment, and Tasks (oh my!):

A heuristic model for classifying testing tasks
Value proposition of “titled Testers”?

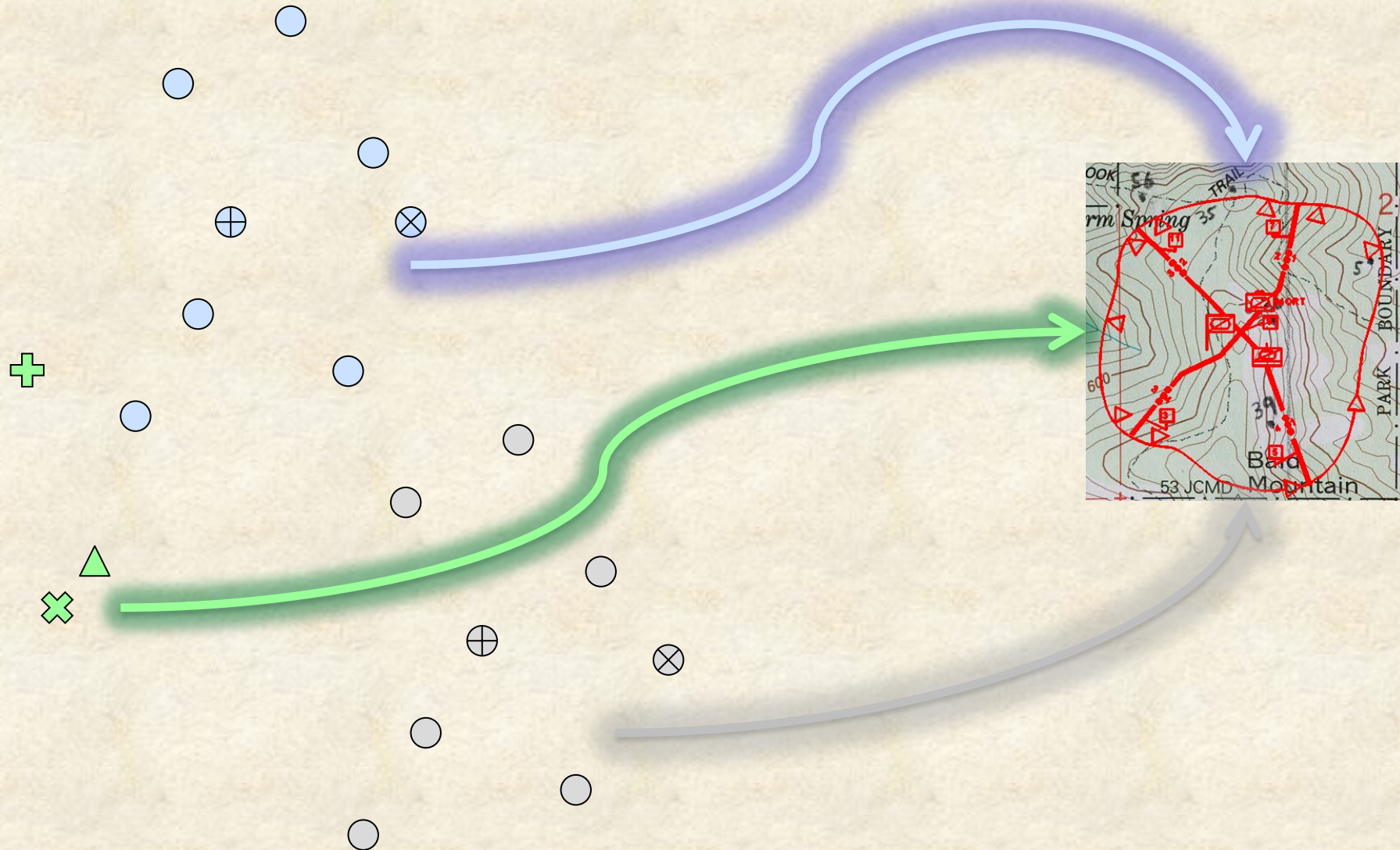
Preview; A Business Value Oriented, Context-Driven Model:

Base assumption
The model (a collaborative work in progress)

Q&A, Praise and/or Public Shredding of Scott’s Model

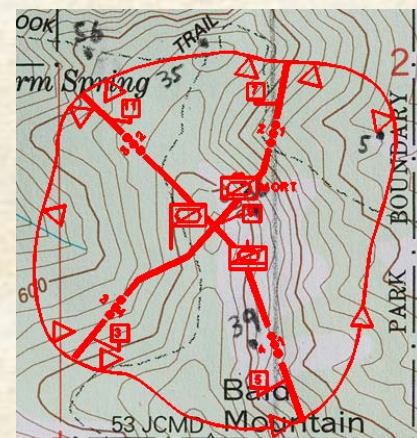
“Take that hill!”

Mission: Secure hilltop 42 NLT 0545 tomorrow.

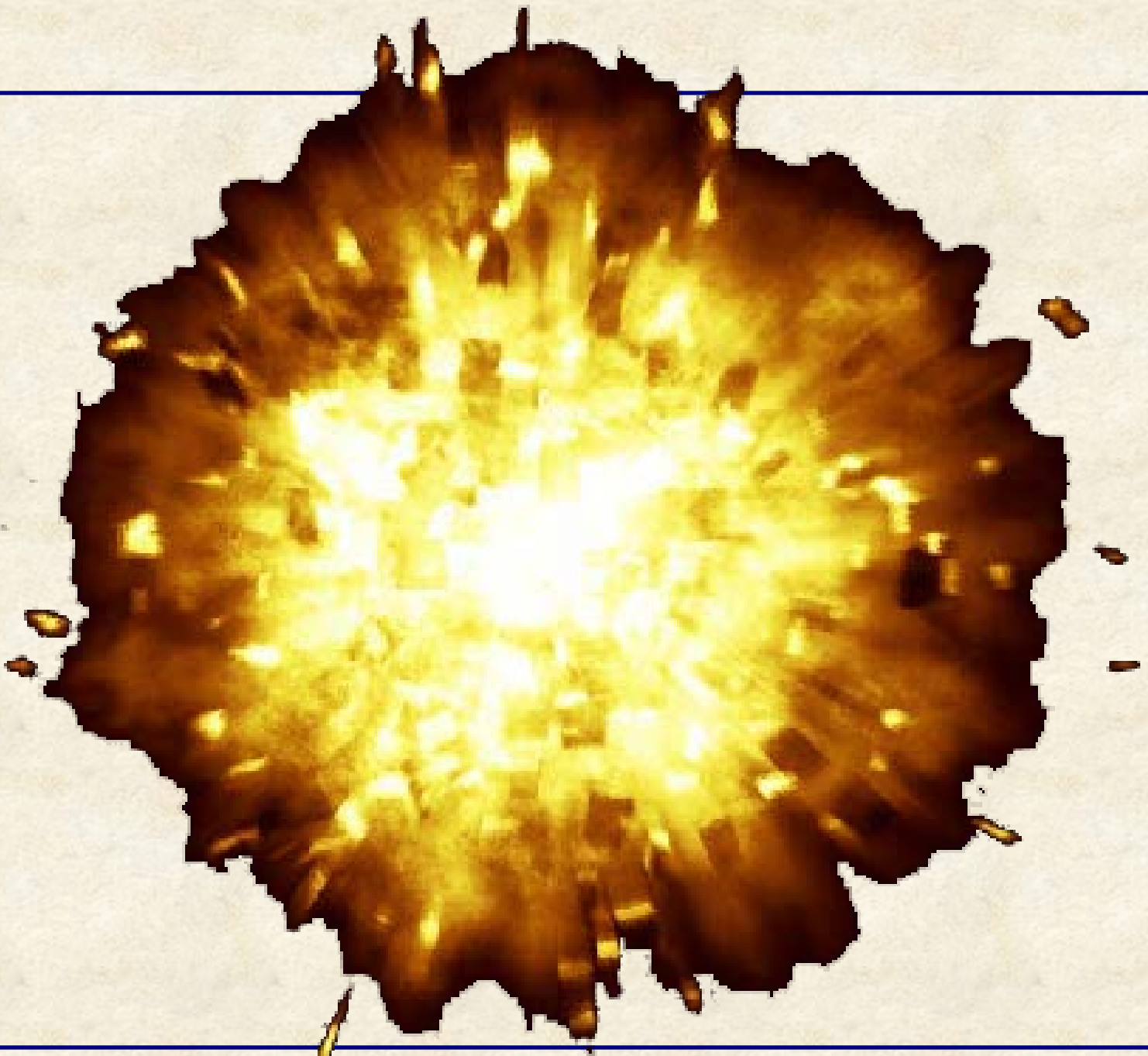


“Take that hill!”

Mission: Secure hilltop 42 NLT 0545 tomorrow.



But then...





*LT Barber,
Front And
Center!*

After Action Review

Commander's Intent: It is my intent that the supply convoy safely cross the bridge spanning the gorge between hilltop 42 and hilltop 57 between 0553 and 0558 tomorrow.



Fail!!

Testing Efforts Can Fail Similarly...

Even if Good Testing is accomplished due to:

Not knowing/accepting the higher mission:

“The boss **says** ship date is most important, but obviously, **this** bug overrides that!”

Assuming the logic behind assignment(s):

“Clearly we’ve been asked to cross-platform testing to ensure consistency.”

Focusing on the assignment role over the mission:

“My job is to find and report problems, not to concern myself with competitive landscapes”

Treating tasks as missions:

“I know the other team is behind, but I can’t help until I finish automating these regression tests.”

To Avoid...



*Test Team,
In my office,
NOW!*

...Get The Mission Right

Purpose: “...*two command levels higher...*”

- The higher mission **IS** your mission
- Coordinate with adjacent & dependent groups to improve chances of mission accomplished

Role(s): Based on...

- Needs of the mission first
- Specific skill areas second
- Individual preference when you're lucky

Inspired by:

FM 7-8

INFANTRY RIFLE
PLATOON AND
SQUAD

Assignment(s): “Yours supports theirs, not vice versa”

- Intermediate goal(s) supporting the larger mission

Task(s):

- Activities necessary to mission success
- Often turn out to be quite different than anticipated

Context-Driven ≠ Context Driver

The most relevant context drivers come from “higher command”:

My experience suggests that for testing, “higher command” equates to:

- “The Business” (~95%)
- Teacher/Professor/Certifier..... (~3%)
- Self..... (~1%)
- Obscure scenarios only people at CAST or Let’s Test would challenge a keynote presenter with..... (<1%)

Common Context Driver “The Business”

No business *wants* to have to pay for testing!

Business only pays for testing because it believes it is cheaper to pay for testing than not to pay for it.

In the eyes of business, testers are a necessary evil.

If you wish to continue being paid to test...

I'm guessing you wouldn't be here otherwise.

... you must validate that belief...

And do so in a way the business understands.

... by helping them succeed.

To a business, success = \$

Purpose

The general purpose of testing in business is to:

- Provide as much information as possible...
- For a reasonable cost...
- To stakeholders involved with developing, customizing, implementing, assessing, managing, and/or making business decisions...
- Related to the relevant product
- Where that information allows the product to start generating, protecting, or supporting revenue more quickly and cheaply
- Than it would if the business had *not* done testing.

Role of Testing, Business Perspective

	Concept	Pretotype	Prototype	Productize	Deploy	Support	Update	Retire
Business Drivers		More Money	ROI Potential, Risk	Market Potential, Progress, Risk	Total Cost to Release < Continue Improving	Cost to Fix < Lost Time/ Revenue	Increased Revenue Potential	Cost to Support > Revenue Potential
Business Decisions			Fund? Amount?	More Funds?	Release?	Fix?	New Version?	End Of Life?
Product State			Pitch	Beta	Release Candidate	Fix	Ver. n+1	
Project Activity		Idea, Research, Create & Deliver "Pitch"	Build MVP (quick & cheap)	Convert MVP to Production Product, (quick & cheap)	Keep Support & Maintenance Costs Down	Resolve. Fast! (and cheap)	Pitch → MVP → Release Candidate; Faster & Cheaper Than Before	Upgrade/ Upsell Alternatives
Expected Questions Addressed Via Testing		Identify Roadblocks & Deal-Breakers	Ensure MVP Is: On Vision, Minimally Fit for Use & Worth of Sale	Assess & Pursue Shortest Path to Revenue Generating/ Protecting Product	Predict & Prevent Revenue/Profit Loss (a.k.a. Mitigate Risk)	Stop Revenue Loss w/o Causing Other Revenue Loss	Realize New Revenue Opportunities w/o Damaging Existing Revenue Streams	Enable Smooth Transition for Customers/ Users
		Is there a viable market for it? What are the business risks?	Consistent with the vision? Minimally fit for use? Most common/ important functionality sufficient for sale/use?	Is it fit for production? Does it comply with regulations? Are business & technical risks being appropriately mitigated?	Why do users choose a competitor/ return product/ not renew? What support calls cost most? Why do users replace with a competitor?	Impact of the change? How risky is it? Quicker/ cheaper/safer option? How do we get it out fast with confidence?	Same as previous, only better, faster and cheaper.	What can we do at an absolutely minimal cost to protect customer data? Loyalty? Privacy?

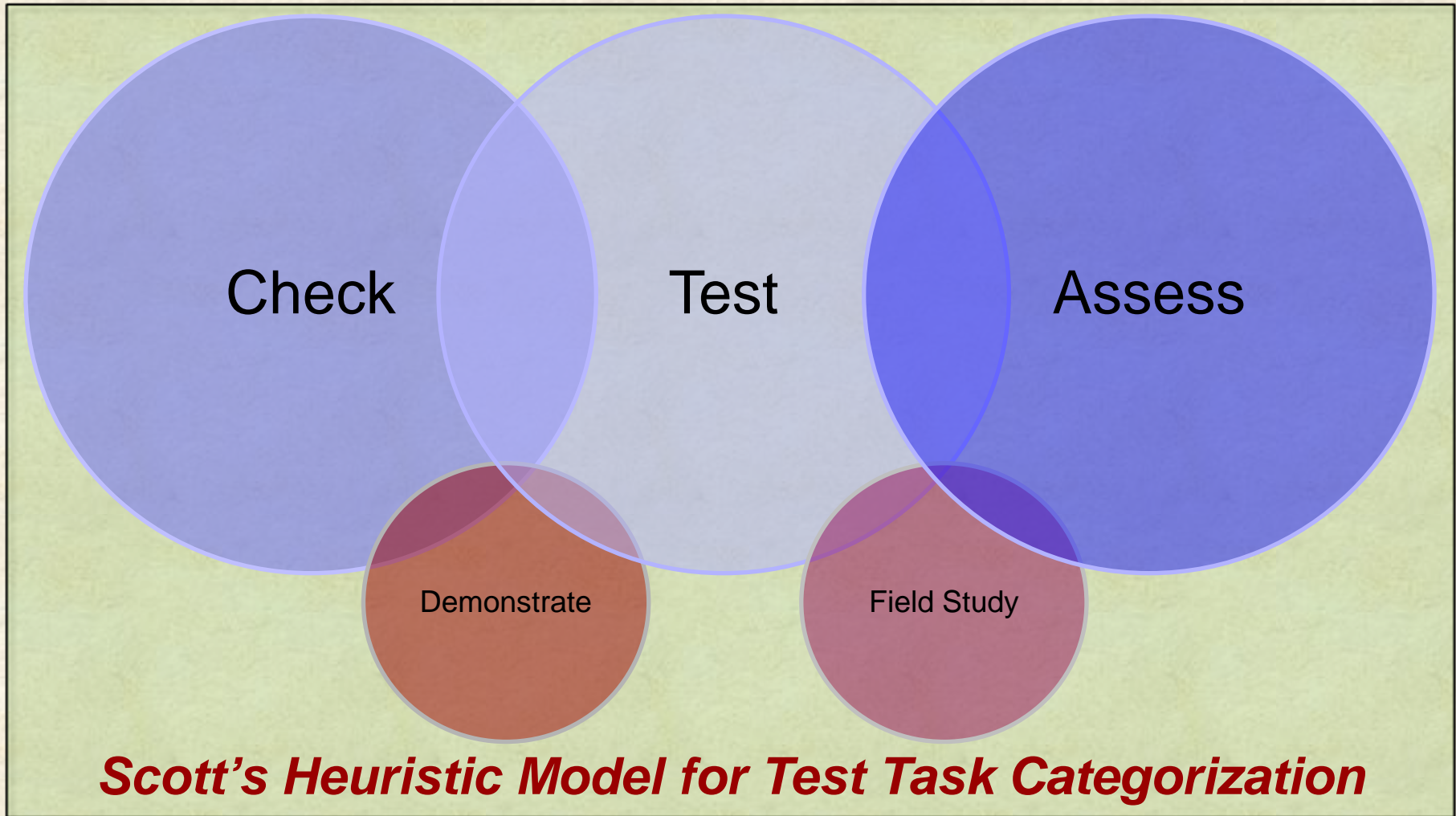
Assignment

An Assignment, as it relates to testing:

- Is often mis-labeled as a mission unto itself (but it isn't)
- In some cases, is viewed as a subordinate/supporting mission
- Distinct from core mission in that Assignments:
 - Identifies who is to take charge of
 - Completing one or more intermediate steps
 - Progressing toward core mission accomplishment
- Includes freedom, responsibility, and accountability to adapt as situation (context) changes to better support purpose and mission
- Typically relates to groups vs. individuals

Task

Self-Managed, individual or small group activity in scope of assignment supporting purpose and mission.



Building a Testing Mission

2 Higher Mission:

Grow a successful business by increasing net profit by producing products and/or services considered valuable for the price.

1 Higher Mission:

Produce product/service X, as quickly and cheaply as possible considered valuable at target price.

Testing Mission:

Support the product/service development team by identifying, assessing against, and generally assisting to deliver the easiest quality bar associated with “valuable at the target price” as quickly and cheaply as possible.

Given this Testing Mission...

Is there intrinsic value to an identified “Test Group”?

On what context considerations is your opinion based?

If the context could be changed, would your opinion?

Is there intrinsic value to “Titled Testers”?

Is there individual/personal value?

Context considerations?

In the “proper context” how would the title “Product Delivery Team Member” feel?

Scott's Point of View

Title detracts from collaborative work

Title detracts from focus on business value

Title (currently) enhances executive misunderstanding & micro-management.

Incoming Transmission

TOP SECRET

Good morning Scott,

“The Boss” has been watching your presentation and sends the following:

Your mission, should you choose to accept it, is to, by any means necessary, tune this message for all product/service delivery roles, and share the message as broadly as possible with the goals of increasing the realized business value of testing and generally improving the balance of cost, quality, and time to market.

Do you accept this mission?

Yes

No

A Work In Progress

Imagine, if you will, a “testing” model that is:

- Business-Value Centric
- Business-Risk Focused
- Mission-Driven
- Comprehensive
- SDLC Agnostic
- Executive Language Compliant
- Context-Driven
- Built by Synthesizing Lessons from Established Industries
- Reflects the Complexity of, and Skill needed to do well...

Software System Readiness Assessment: Model

Relationship to Anderson & Krathwal's revision of Bloom's Taxonomy		Cognitive Process Dimension					
		Remember (Knowledge)	Understand (Comprehend)	Apply (Application)	Analyze (Analysis)	Evaluate (Evaluation)	Create (Synthesis)
Knowledge Dimension	Assessment Dimension	System Dimension					
		Static Data & Objects	Dynamic Data & Objects	Interactions & Integrations	Data & Usage Flows	Derived/ Calculated Data & Objects	Fitness For Use
Factual	Informational						
Conceptual	Progress/Completeness						
	Correctness						
Procedural	Auditable						
	Legal						
Meta-Cognitive	Risk-Control						
	Security						
	Performance						

Software System Readiness Assessment Types

Category	"Task"	Dimension	Assessment	Example	Description
Check	Validation	Legal/Compliant	Y/N	Compliance Checklist	Does the process/assessment evidence comply with appropriate regulations, contracts and/or
	Verification	Auditable	Y/N	Audit Rules	Does this meet auditability standards?
	Quiz	Correctness	Informal	Unit Test	Information to be used by developers to make decisions about "what do I have left to do on X?" or "how much more time should I spend on X?"
	Pre-Test	Progress/Completeness	G/Y/R	BVT, Smoke Test	Defects/issues logged, information to be used by all to decide if system is ready for next phase. Like an end of iteration/sprint progress report
Demonstrate	Pitch	Informational	Informal	Sales/Pitch Brief	Storyboard presentation to gain project approval/funding
	Placement / Aptitude Test	Risk-Control	Informal	Proof of Concept	Information to be used by management to make decisions about "what to do with this system?"
	Evince	Legal/Compliant	Y/N	Regulatory Demonstration	Demonstrate functionality, for example, to a regulatory board
Test	Experiment	Risk-Control	Information	Soap Opra Test	No expected result, designed to answer a particular question...frequently of the form
	Module Test	Correctness	A-F	Functional Tests	Does this feature/function/story do what it is intended to do correctly?
	Chapter Test	Progress/Completeness	A-F		The bar the system must pass to become a viable release candidate
Field Study	User Needs	Information	Information	Market Research	Assessment of the problem space and/or the value proposition of proposed solution.
	User Satisfaction	Risk-Control	Qualitative	User Acceptance Test	Open-ended feedback from minimally trained potential users
Assess	Exam	All	A-F	Production Certification	Tests administered on release candidates for information about fitness of use
	Comprehensive	All	A-F	User Experience Under Load Tests	A comprehensive collection of tests administered on release candidates that have previously passed exams, to assess fitness in multiple dimensions concurrently

Software System Assessment Report Card

		Risk						Compliance / Conformance		
		Business			Technical			Regulations	Contracts	Expectations
		Financial	Legal	Brand	Security	Performance	Other			
Business	Prospective									
	New									
	Sustainment									
Product / Service	Planning									
	Launch									
	Support									
Project	Development									
	Deployment									
	Maintenance									
		Fitness For Use			Release Readiness			Comments		
		Functionality	Usability	Acceptance	Progress	Completeness	"Score"			
Business	Prospective									
	New									
	Sustainment									
Product / Service	Planning									
	Launch									
	Support									
Project	Development									
	Deployment									
	Maintenance									

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Questions



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