Telling Your Testing Story

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Testing is an unfolding story

Before

After

Story Elements (explorer)

Characters	*Lewis* *Trail Guides* *Staff* *Natives*
Purpose	*"explore Missouri river, & such principal stream of it"* *"communication with the water of the Pacific ocean"* *"most direct & practicable (route)"* *"for the purposes of commerce"*
Conflict	*Indigenous people* *Dangerous animals* *Poisonous plants* *Weather*
Plot	*Techniques used* *Maps drawn* *Treaties established* *Ground covered*

Lewis & Clark, 1802

Clark's notes...

Captain Clark, River Dubois opposite the mouth of the Missouri River, 13 May 1804

"I dispatched an express this morning to Captain Lewis at St. Louis. All our provisions, goods, and equipage on board of a boat of 22 oars [party], a large pirogue of 71 oars [in which 8 French], a second pirogue of 6 oars [soldiers], complete with sails, &c. Men completed with powder cartridges and 100 balls each, all in health and readiness to set out. Boats and everything complete, with the necessary stores of provisions and such articles of merchandise as we thought ourselves authorized to procure-though not as much as I think necessary for the multitude of Indians through which we must pass on our road across the continent."

What happened here?

“(Orderly Book) Camp Mouth of the Kansies June 29, 1804 Ordered --- A Court Martiall will Set this day at 11 oClock... for the trial of John Collins and Hugh Hall...
John Collins Charged "with getting drunk on his post this Morning out of whiskey put under his charge as a Sentinal, and for suffering Hugh Hall to draw whiskey out of the Said Barrel intended for the party."
...The commanding Officers approve of the Sentence of the Court and orders that Punishment take place at half past three this evening, at which time the party will Parrade for inspection.”

June 29, 1804
William Clark

Story Elements

Characters	*Testers* *Stakeholders* *Programmers* *Customers / Users*
Purpose	*“How stable are these new features?* *“Should we slip the beta date?”* *"We’re looking good for today’s release.“* *“Try to repro this bug”*
Conflict	*How to mitigate risk?* *Limited budget and time* *"How does this thing work?“* *"We have yet to run <these> tests."*
Plot	*Risks exposed* *Techniques used* *Features covered* *Configurations tested*

Story Elements

	Historical Explorer	Tester
Observations (To the degree you think they are relevant to stakeholders)	• drawings of flora / fauna • descriptions of indigenous people • landmarks	• feature model • text from log files • text from dialogs
Conjectures (Inferences based on experiences. After I test, I think I know something)	• what is this thing? • where should we go today? • how do we get there? • new orders from HQ? • are those people hostile?	• test ideas • questions • product and project issues • concerns • risks
Project information (Independent of observer)	• mission • supplies and staff • latitude / longitude • death and disease • supply status	• charter • test actions • config info • build details • tools used

Why this talk?

1) *Exploratory testers are fighting for respect:* People tell me that when they explore during testing, they find great bugs. However, they often don't know how to describe their thinking, so it's considered to be "playing around".

2) *The documentation dilemma:* Most project managers insist that all testing be documented, but exploratory testers tend not to talk about how they balance time spent documenting and time spent testing.

3) *Your work will be scrutinized:* You may have to give a report someday about something you did that was exploratory – like attending this conference.

Therefore...

1) **Respect:** I'll talk about my antidote for the "playing around" perception -- to use specific labels for the skills and tactics I used during exploration.

2) **Documentation:** I'll talk about a way to make exploratory testing manageable, measurable, and accountable – balancing the need for documentation with the need to actually get some testing done.

3) **Scrutiny:** I'll talk about what I want from my testers and how I prepare for scrutiny from clients who want to see value.

Key Idea

Testing is...

an infinite process

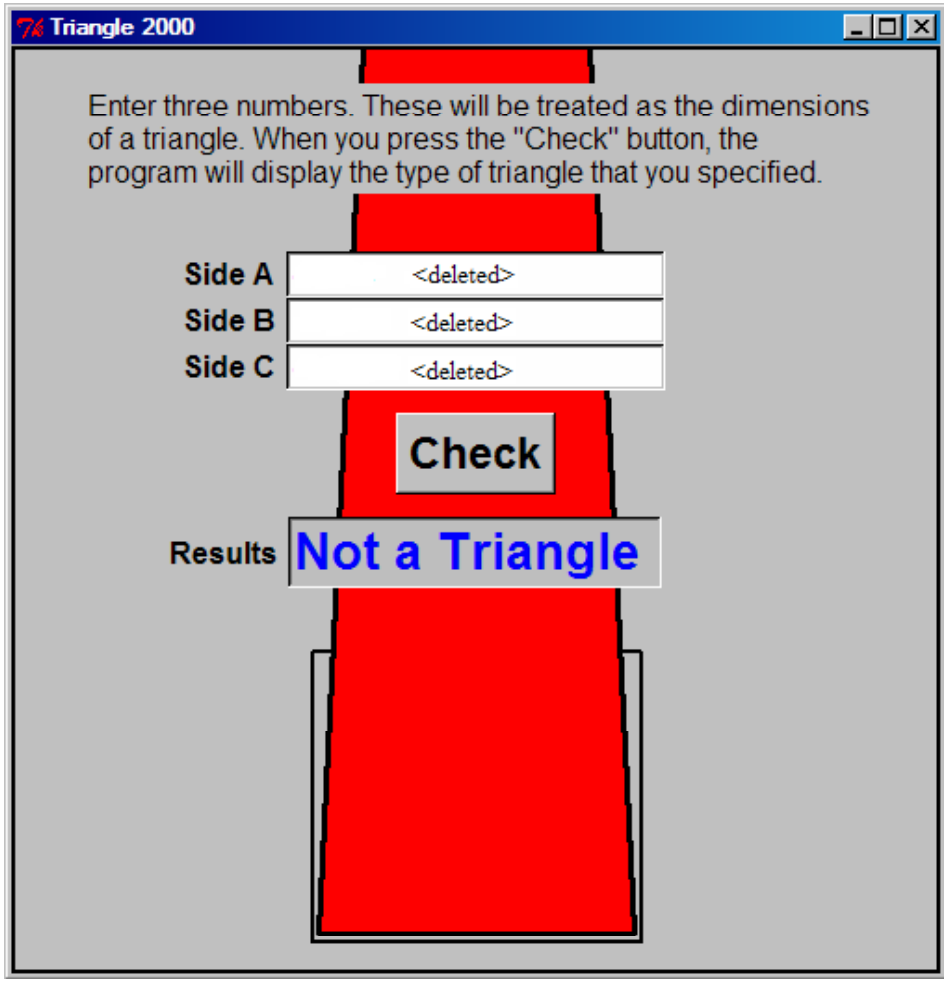
of comparing the invisible

to the ambiguous

in order to avoid the unthinkable

happening to the anonymous.

ET in action: Repro this bug



How did you *find* that?

Some Exploration Skills and Tactics

"MR.Q COMC GOARABC R&R?"

Modeling
Resourcing
Questioning

Chartering
Observing
Manipulating
Collaboration

Generating/Elaborating
Overproduction/Abandonment
Abandonment/Recovery
Refocusing
Alternating
Branching/Backtracking
Conjecturing

Recording
Reporting

Exploratory testing is a mindset using this skillset.

Modeling

Composing, describing, and working with mental models of the things you are exploring. Identifying relevant dimensions, variables, and dynamics. A good mental model may manifest itself as having a “feel” for the product; intuitively grasping how it works.

Resourcing

Obtaining tools and information to support your effort. Exploring sources of such tools and information. Getting people to help you.

Questioning

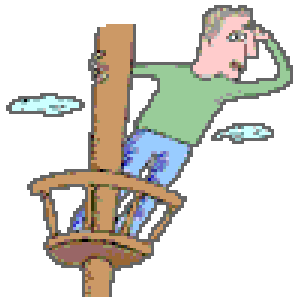
Identifying missing information, conceiving of questions, and asking questions in a way that elicits the information that you seek.

Chartering

Making your own decisions about what you will work on and how you will work. Understanding your client's needs, the problems you must solve, and assuring that your work is on target.

Observing

Gathering empirical data about the object of your study; collecting different kinds of data, or data about different aspects of the object. Designing experiments and establishing lab procedures.



Manipulating

Making and managing contact with the object of your study; configuring and interacting with it.

Collaboration

Working and thinking with another person on the same problem; group problem-solving.

Generating/Elaborating

Working quickly in a manner good enough for the circumstances. Revisiting the solution later to extend, refine, refactor, or correct it.

Overproduction/Abandonment

Producing many different speculative ideas and making speculative experiments, more than you probably need, then abandoning what doesn't work. Examples are brainstorming, trial and error, "bracketing" in photography, genetic algorithms, free market dynamics.

Abandonment/Recovery

Abandoning ideas and materials in such a way as to facilitate their recovery, should they need to be revisited. Maintaining a “boneyard” of old ideas.

Refocusing

Managing the scope and depth of your attention. Looking at different things, looking for different things, in different ways.

Alternating

Switching among or contrasting different activities or perspectives so as to create or relieve productive tension and make faster progress.

Alternating -- Polarities

Warming up vs. cruising vs. cooling down

Doing vs. describing

Doing vs. thinking

Careful vs. quick

Data gathering vs. data analysis

Working with the product vs. reading about the product

Working with the product vs. working with the developer

Product vs. project

Solo work vs. team effort

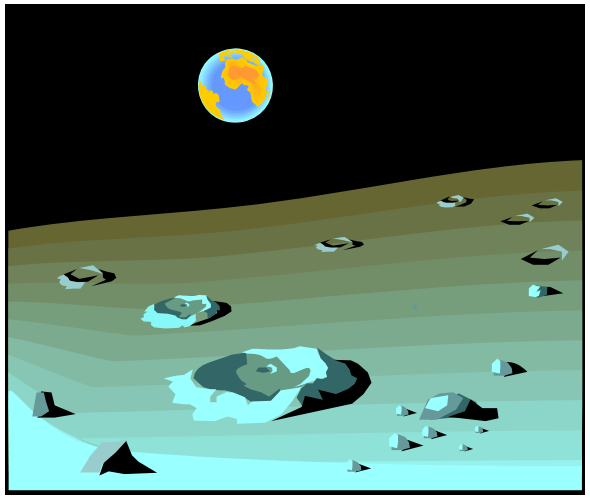
Your ideas vs. other peoples' ideas

Branching/Backtracking

Allowing yourself to be productively distracted from one course of action in order to explore an unanticipated new idea. Identifying opportunities and pursuing them without losing track of the process.

Conjecturing

Considering possibilities and probabilities. Considering multiple, incompatible explanations that account for the same facts.



Recording

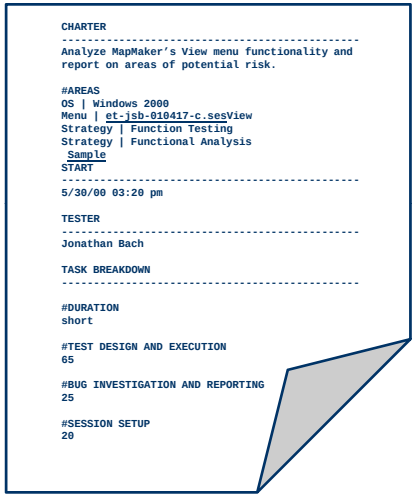
Preserving information about your process, progress, and findings. Taking notes.

Reporting

Making a credible, professional report of your work to your clients in oral and written form.

Session-Based Test Management

- **Charter**
  - #AREAS



```
CHARTER
-----------------------------------------------
Analyze MapMaker's View menu functionality and
report on areas of potential risk.

#AREAS
OS | Windows 2000
Menu | et-jsb-010417-c.sesView
Strategy | Function Testing
Strategy | Functional Analysis
 Sample
START
-----------------------------------------------
5/30/00 03:20 pm

TESTER
-----------------------------------------------
Jonathan Bach

TASK BREAKDOWN
-----------------------------------------------

#DURATION
short

#TEST DESIGN AND EXECUTION
65

#BUG INVESTIGATION AND REPORTING
25

#SESSION SETUP
20
```

- **Notes**
- **Bugs**
  - #BUG
- **Metrics**
  - #DURATION
  - #TEST DESIGN AND EXECUTION
  - #SESSION SETUP
  - #BUG INVESTIGATION AND REPORTING
  - #CHARTER / OPPORTUNITY
- **Issues**
  - #ISSUE

Jon Bach, 2001

Sample test notes from actual exploratory testing:

et-jsb-010416-a.ses

et-jsb-010417-c.ses

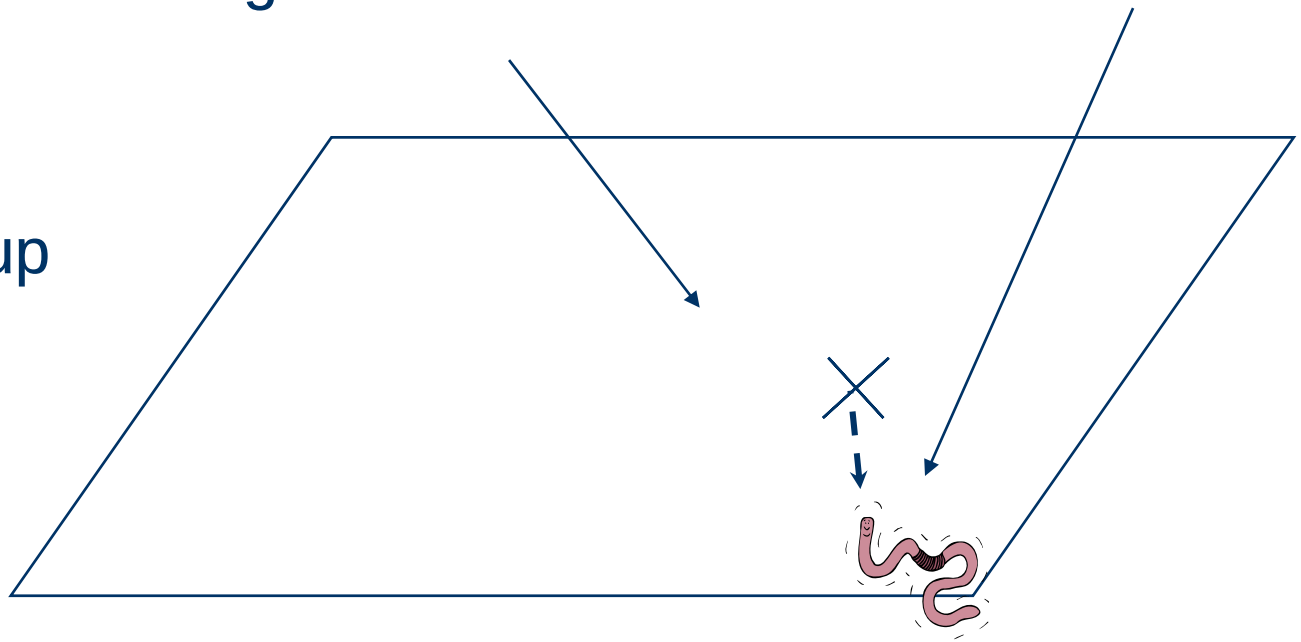
The 3 activities of ET

Test Design and Execution

Bug Investigation

(and Reporting)

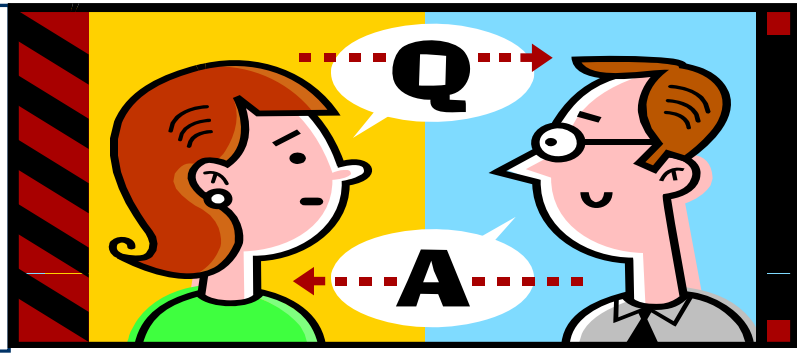
Session Setup



Anticipating Scrutiny

Agenda: "PROOF"

- **P**ast
- **R**esults
- **O**bstacles
- **O**utlook
- **F**eelings



Past: What kinds of things did you do?

Results: What were your findings?

Obstacles: What slowed your mission?

Outlook: Where do we go from here?

Feelings: How are you feeling about what happened?

The real message

What's being asked	What they may be thinking
What was your mission?	*Remind me what I told you to do.* *Why did you do that?*
How did it go?	*Were you careful or reckless?* *What should I be worried about?*
How far [illegible] you go?	*Are we closer to shipping?* *Can you help me know our status?*
Need anything?	*Can I speed this along?* *Do you need more of my time?*
When will you be done?	*Will I get my bonus?* *I have a new task for you…*

"Are you on top of this?"

A story of my exploration

Another story of exploration

HTML status report

Next steps?

1) *Tell your "tactics" story: Practice some terminology for the skills and tactics of exploration. It has helped managers understand the sapience of testing.*

2) *Try SBTM to balance documentation and testing: Frame your explorations in sessions (time-boxed effort with a report) and see how your stakeholders react.*

3) *Use PROOF to anticipate scrutiny: Testing ourselves is just as important as testing software. It has won testers more credibility, autonomy, and respect.*

Sources / More info

Context-Driven Software Testing
http://groups.yahoo.com/group/software-testing

Center for Software Testing Education and Research
http://www.testingeducation.org/BBST

Books related to Exploratory Testing skills and tactics
http://www.testingreflections.com/node/view/3190