

Tasking Exploratory Testers

Setting Testers Free

TISQA 2006

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Exploration is a journey...

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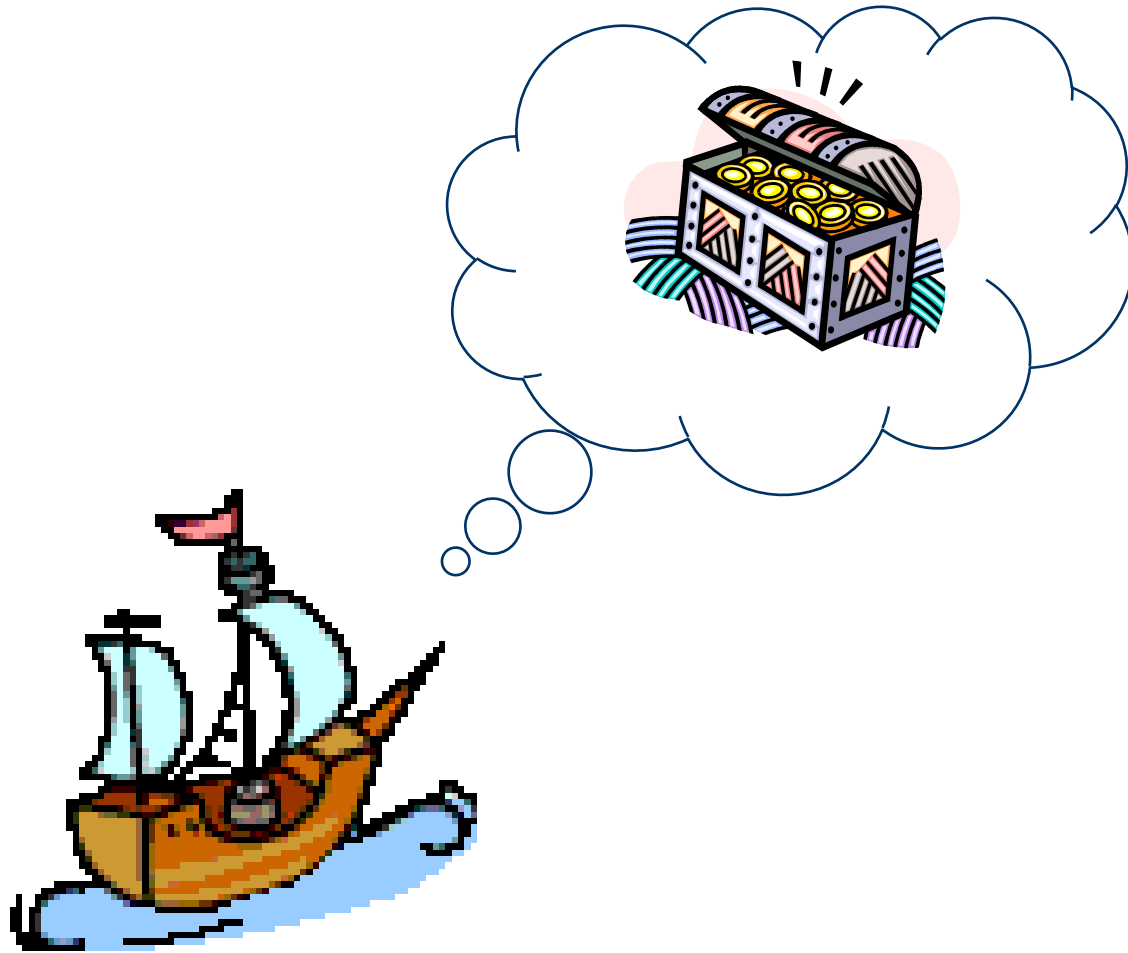
Parts Unknown

?

?



...toward a mission...



...where the tester...



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...learns and adapts...



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...to emerging information



Earth stops here...

Key Idea #1

**If you don't have questions
while you test,
you're not testing... YET.**

Questions

Lead to



test ideas
test cases
test scenarios
test plans
test scripts
test designs
test strategies
test heuristics

Questions

Lead to



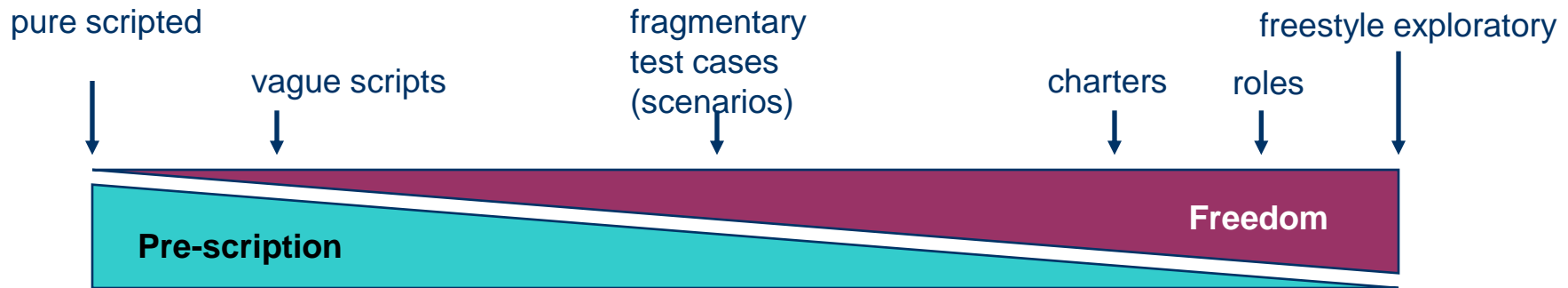
- test ideas
- test cases
- test scenarios
- test plans
- test scripts
- test designs
- test strategies
- test heuristics

These comprise the exam to which software will either pass or fail.

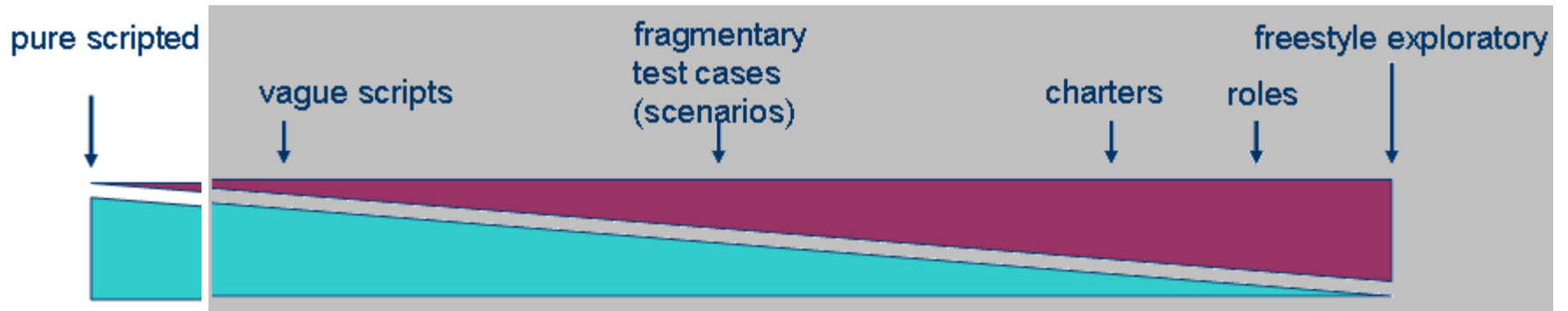
Key Idea #2

**If you're not free to think,
or learn,
or adapt while you test,
you're not exploring.**

The “freedom” scale



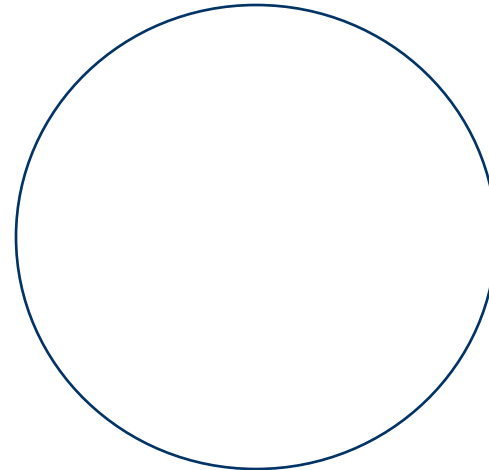
Pure scripted



Hard scripting



Test execution

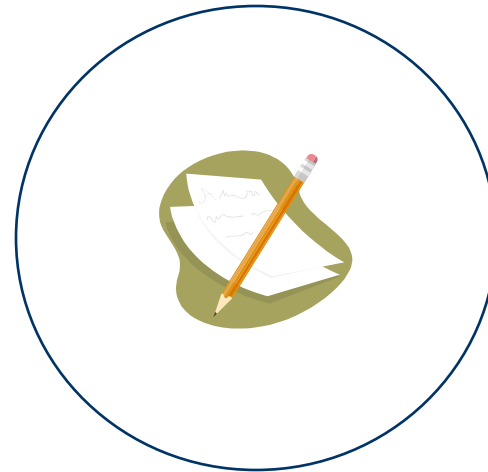


To know if a script is soft or hard, the tester must ask: *“to what extent am I in control of the test, and from where and when did the idea originate?”*

Soft scripting

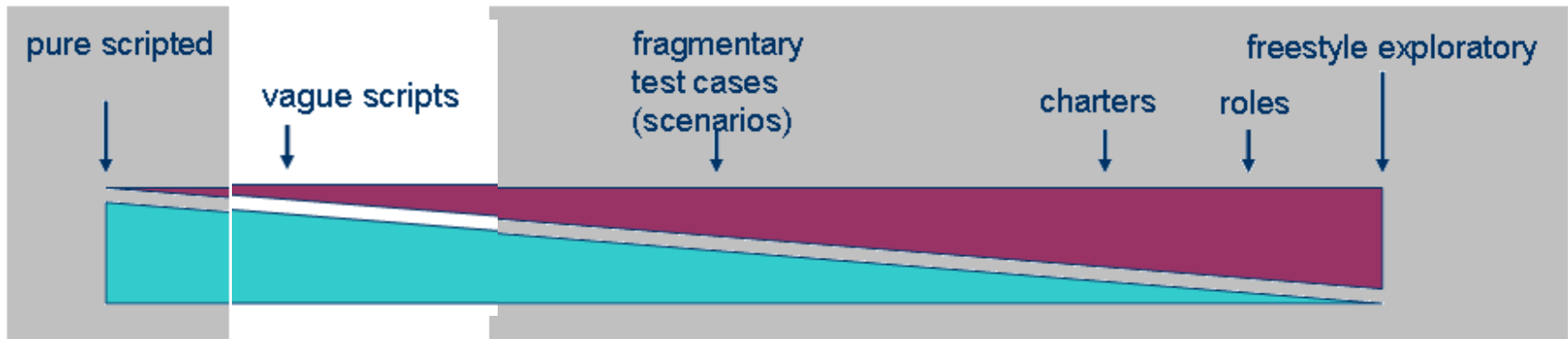


Test execution



To know if a script is soft or hard, the tester must ask: *“to what extent am I in control of the test, and from where and when did the idea originate?”*

Vague scripts

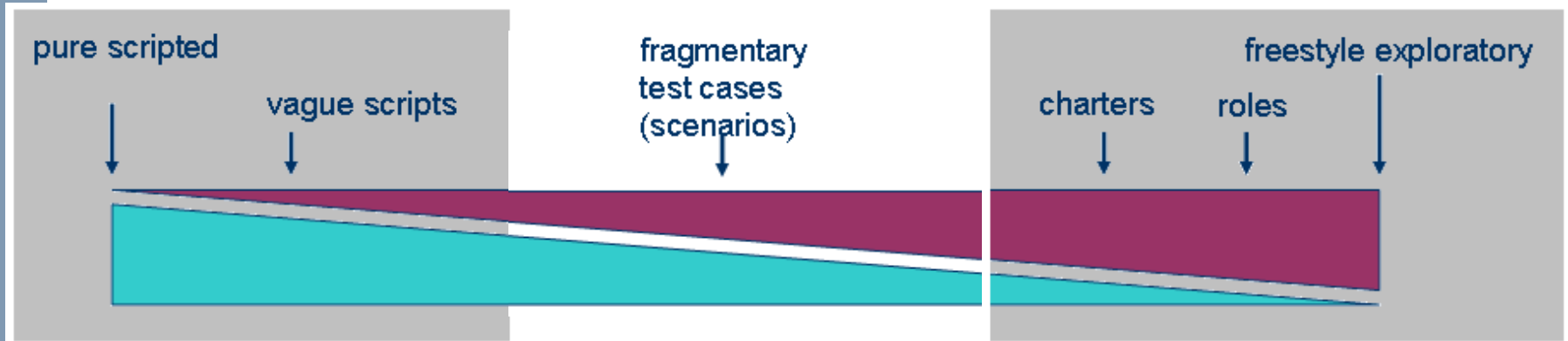


A vague script

This is a smoke test of the triangle program:

- 1. Start from a clean machine**
- 2. Launch it without rebooting machine**
- 3. Walk through Windows generic functions (see *WinUI_TCO*)**
- 4. Choose some numbers to cause it to display each of the three kinds of triangles**

Fragmentary test cases



Scenarios

“A scenario is a story that describes a hypothetical situation. In testing, you check how the program copes with this hypothetical situation. The ideal scenario test is ***credible, motivating, easy to evaluate, and complex.***”

– Cem Kaner

Scenario components

Mission

Personas

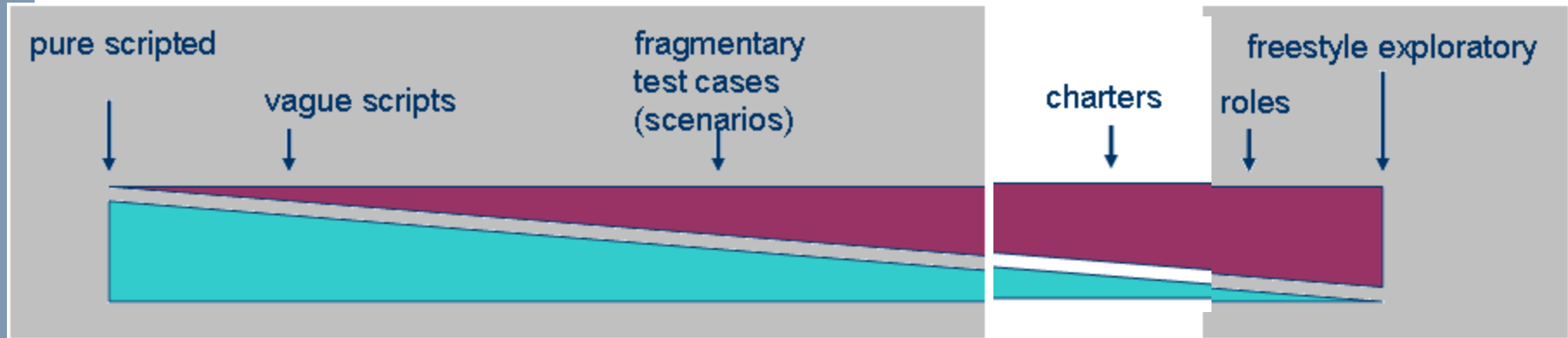
Setup

Activity Patterns

Oracle Notes

Variations

Charters

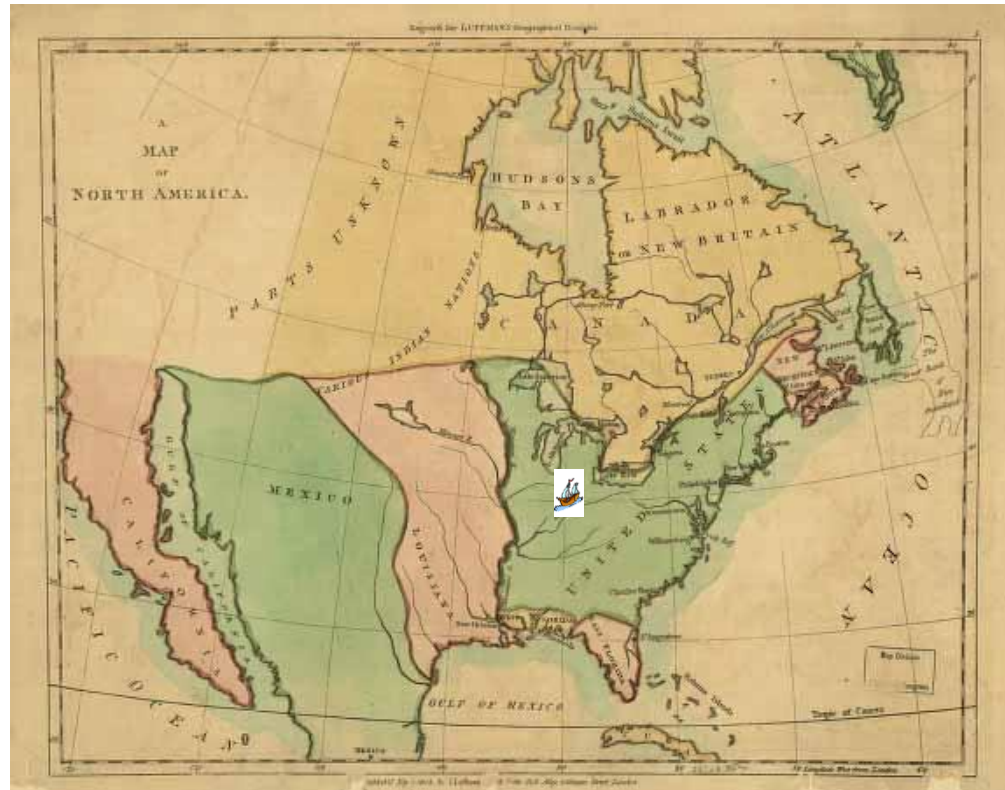


Chartering

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.



Lewis & Clark, 1802



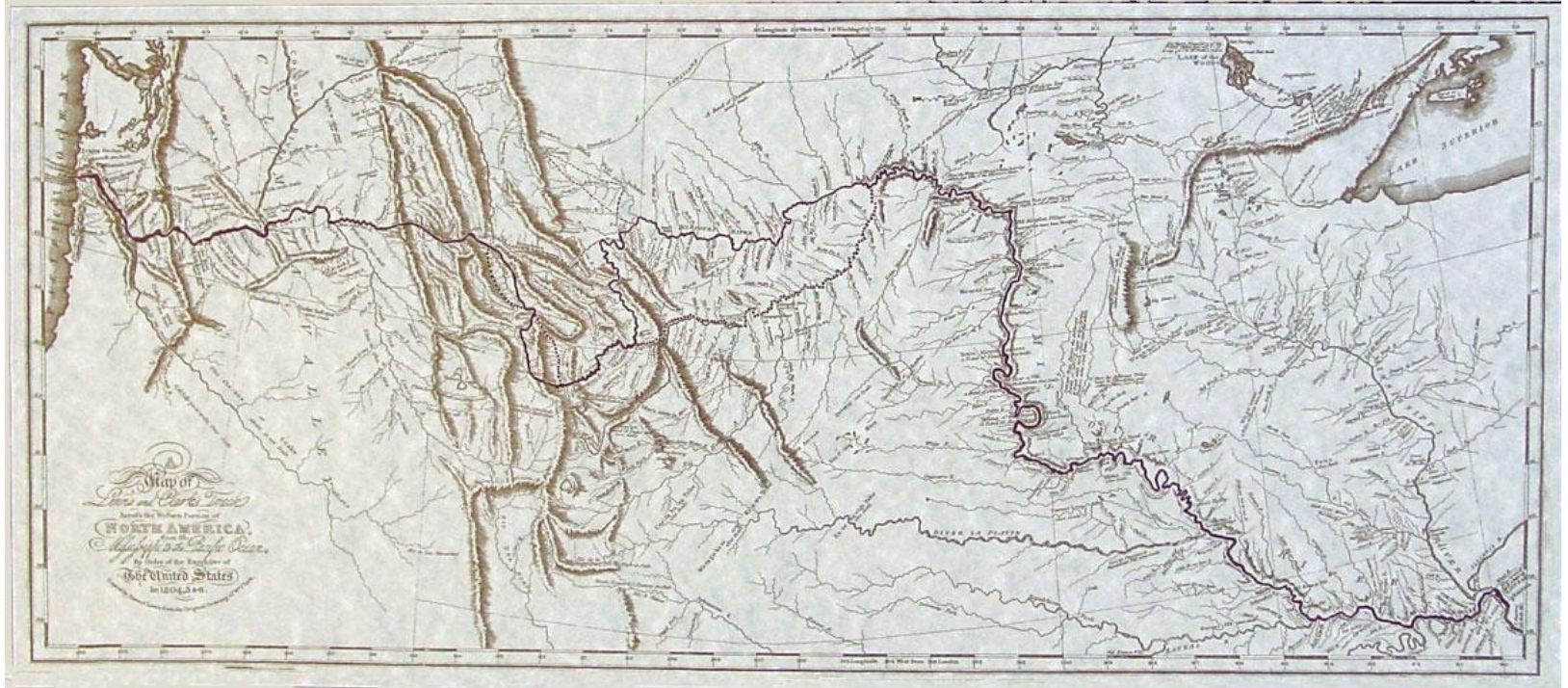
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The charter from Jefferson

“The object of your mission is to explore the Missouri river, & such principal stream of it, as, by its course & communication with the water of the Pacific ocean may offer the most direct & practicable water communication across this continent, for the purposes of commerce.”

<http://www.monticello.org/jefferson/lewisandclark/instructions.html>

Results



<http://www.lewis-clark.org/content/content-article.asp?ArticleID=2212>

Some sample session charters

- **Installation:** When installed, does Triangle! put any files in the wrong places? Does it leave any files for the uninstall? Check the registry keys, use InCtrl to see what changes are made. Installation is new, so we want to be sure it's clean.
- **Boundary testing:** We got word from customer support that there are run-time errors when using integers over 32000 but no one can repro it. Best recon is on Win XP Pro with Office 2003 running in the background. Sam K. in CSS says you can use his machine, and he also has customer specs.
- **Ship drill:** Start Triangle! right out of the box. For example, is the readme ready to go? We're waiting from word on Legal as to the License Agreement, but that shouldn't hold you up. Also make sure you hit Vista and see what issues arise there.
- **Claims testing:** Triangle is meant for first graders, but we plan to ship a version to General Dynamics in a few months. Try some usability profiles or personas to see what functions become more or less risky. Also, discover the algorithm by which Triangle! reports its results. Is it way off from what a user would expect. Does it cause the user to lower their confidence?

Sponsors and stakeholders

- Test Manager
- Product Manager
- CEO
- Customer
- Developer
- Marketing
- Tech Writer
- Customer Support
- Other testers
- Us!



What managers might ask

How did you spend your time?

What did you find?

Did you need some help / tools?

Do you think there's more to do here?

Was this mission reasonable?

Agenda: "PROOF"

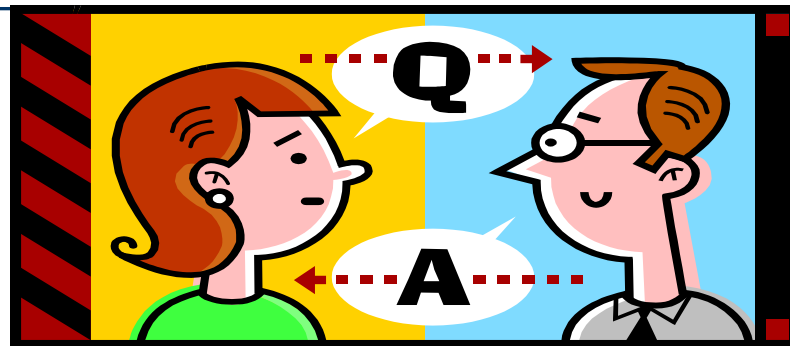
Past

Results

Obstacles

Outlook

Feelings

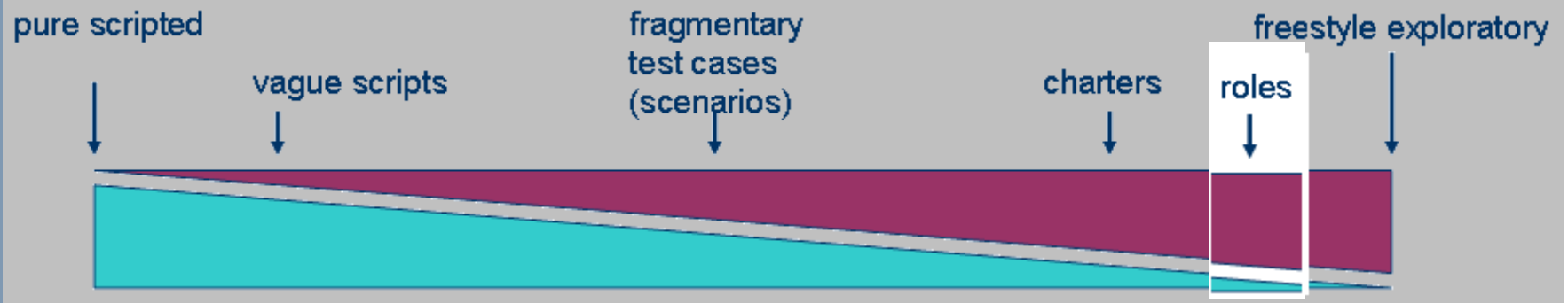


The real message

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

"Are you on top of this?"

Roles

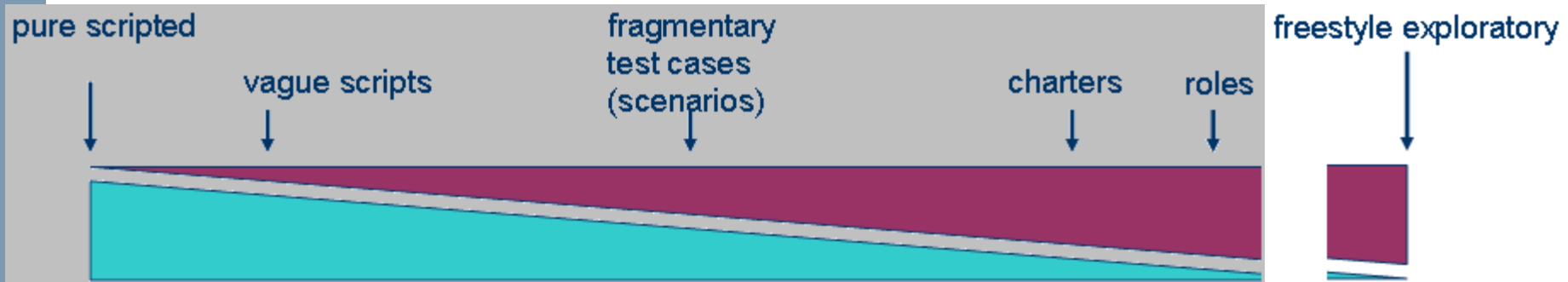


Exploratory Roles

Feature areas can be assigned to testers, giving them a sandbox to purposefully constrain them from doing other tasks:

- Installation
- Compatibility
- Database integrity
- Third-party add-ins
- Tools
- Configuration
- Usability
- Claims
- Performance
- Online help and docs
- Recon
- Smoke
- Interop
- Beta

Freestyle



Freestyle: where could I start?

Test Plan Evaluation Model

<http://www.satisfice.com/tools/tpe-model.pdf>

Test Planning Checklist

<http://www.satisfice.com/tools/build-the-plan.pdf>

Heuristic Test Strategy Model

<http://www.satisfice.com/tools/satisfice-tsm-4p.pdf>

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

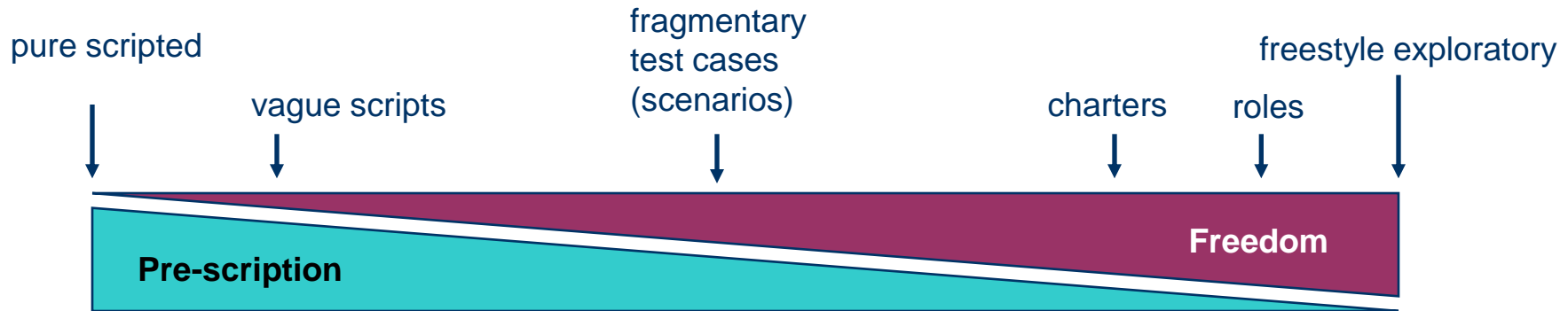
Reporting

Exploratory testing is a mindset using this skillset.

What to write while exploring

	Historical Explorer	Tester
Observations (To the degree you think they are relevant to stakeholders)	<ul style="list-style-type: none">• drawings of flora / fauna• descriptions of indigenous people• landmarks	<ul style="list-style-type: none">• feature model• text from log files• text from dialogs
Conjectures (Inferences based on experiences. After I test, I think I know something)	<ul style="list-style-type: none">• what is this thing?• where should we go today?• how do we get there?• new orders from HQ?• are those people hostile?	<ul style="list-style-type: none">• test ideas• questions• product and project issues• concerns• risks
Project information (Independent of observer)	<ul style="list-style-type: none">• mission• supplies and staff• latitude / longitude• death and disease• supply status	<ul style="list-style-type: none">• charter• test actions• config info• build details• tools used

The “freedom” scale



More info

- ET Dynamics:
<http://www.satisfice.com/articles/et-dynamics.pdf>
- Test Heuristics and Planning
<http://www.satisfice.com>
- 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>
- Scenario testing examples
<http://www.testing.com/test-patterns/patterns/pattern-scenario-testing-kaner.html>