"Er, What?"

Requirements, Specifications and Reality: Distilling Truth from Friction

-- Cat Okita

Friday, November 12, 2010
Why bother?
Theory
Practice
Reality
Why bother?

What are you trying to do?
Why are you trying to do it?
How are you going to do it?
Who’s doing it?
How can you tell that you’re done?
Theory
Quick’n’Dirty

Goals

Why are you doing this?

Requirements

What means that you’ve met the goals?

Specifications

How do you meet the requirements?

Implementation

Do the work according to the specifications

Review

Does the work match reqt’s, solve problem?

Completion

Done!
Goals

Why are you doing this?
What do you want to do?
What problem(s) are you trying to solve?
Requirements

What meets the goal(s)
What is success?
What are the limitations?
Who’s involved?
How can you tell that you’re done?
Specifications

How do we meet the requirements

Detailed

Specific

Prescriptive
Implementation

Do Stuff!
Build
Test
Deploy
Review

Did we hit our goal?
Did we meet the requirements?
Did we follow the specifications?
Completion
Practice
Bang for your Buck
Participate
Cooperate
Communicate
Document, Document, Document!
Common Ground
Appropriate
Brevity is the soul of wit
Ask, don’t tell!
Agree
No Surprises
Why?
Summary

One or two short sentences that anybody can understand

- “Need to automate to do more work with less people”

vs

- “Synergize our core competencies with advanced enterprise specific COTS software to increase overall productivity while maintaining or reducing existing overhead”
What?
Clarify Goals
Define Audience
Describe Success
Set Limits
Focus

Turn goals into something useful
What will meet the goals
Audience

Who cares?
Who needs to be involved
Who are the consumers
Success

How can you tell that you’ve met the goal(s)
How can you tell that you’re done?
<table>
<thead>
<tr>
<th>Limit</th>
<th>Scope</th>
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<tbody>
<tr>
<td>People</td>
<td>People</td>
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<tr>
<td>Things</td>
<td>Things</td>
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<tr>
<td>Money</td>
<td>Money</td>
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<tr>
<td>Time</td>
<td>Time</td>
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</tbody>
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Realistic

“Able to recover from hardware failures in 4 hours”

vs

“Hardware must never fail”
Relevant

“Total budget of $600,000, not including ongoing support and maintenance costs”

vs
Measurable

“Production servers must have 99.9999% uptime”

vs

“Stuff can’t break!”
Unambiguous

“Web server must serve 10,000 hits/hour”

vs

“Good web server”
How?
Meets requirements
Stays within limits
Detailed
Specific

“Use Apache 2.x with Tomcat to serve dynamic web content”

vs

“Use a web server”
Appropriate

“The web server platform will be DL380 G6 servers with the following configuration ...”

vs

“The web server platform will be a Cray XT5...”
Sane
Where do Requirements and Specifications come from?
Storytime
Our Protagonists
Goal:
Build Death Star
Pumpkins!
Requirement: Use pumpkin
“Something is Missing”
Requirement: Lights
“There’s no space for lights in there!”
Requirement: Empty Pumpkin
“Ewww!”
Specification:
Use spoon to clean out Pumpkin
“This spoon is not working well. ...”
Problem: Spoon is not the right tool!
“Hmmm ... “
“Here, Try this!”
Reality
Build
Buy

Friday, November 12, 2010
Borrow
Communication
Confusion
Consternation
Communication
Scope Creep
Ask Mom / Ask Dad
“I’m ignoring you ...”
Confusion
Fuzzy Language
Out of touch with Reality
Solutions looking for a Problem
Consternation
Bad Assumptions
Missing Limits
Death from Above
Clarify
Change
Ignore
“We’re moving everything into the Cloud”
The Cloud ??
What’s “everything”?
“Bring our application management tools into the 21st century”
Who's involved?

External Contractor
System Administrators
Application Owners
Requirements

Replace legacy 3270-based application management tools with current, supported COTS software
Specifications

Windows 2003 / 2008
Click-and-drag interface
A minor technical detail ...
Just like me
NASA Mars Climate Orbiter
A Lockheed Martin spokesperson confirmed that their engineers had been sending data in English units.

When asked whether the company was aware that NASA had been expecting metric units, the spokesperson said, "Obviously not."

http://www.space.com/missionlaunches/launches/orbiter_errorupd_093099.htm
RFPs
RFC1149 & RFC2549
Datacenter Cleanup
“Remove unused and decommissioned equipment from the Datacenter to reclaim power and space for future use”
Who’s involved?

Systems Engineering
Network Engineering
Project Management
System & Network Operations
Requirements

Identify unused equipment

Identify decommissioned equipment

Remove identified equipment from datacenter raised floor
Specifications

Systems and Network Operations will identify unused and decommissioned equipment by rack number, and provide a list to Facilities Management.

Facilities Management will power off and remove the equipment on the list from the datacenter raised floor.
A minor technical detail ...
Thanks to:
Noel Dickover
(http://www.fantasypumpkins.com/carving-the-deathstar.htm)
Questions?