…And You Didn't Report It?!

Roadblocks to Bug Reports

Michael Stahl

SW Validation Architect, Intel

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Why Indeed?

10 reasons why testers do not report bugs

… and ways to overcome them

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10 reasons why…

1. Can't reproduce
2. The Fairy Tale
3. It’s the same Root-Cause
4. It’s in the Spec
5. "Stuckness”
6. One Bug? Two Bugs?
7. Integration Bugs
8. Did THAT just happen?
9. Usability
10. Frustration

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1. Can't reproduce = Don't report

- **Test passed on rerun…**
- **Disappeared after reboot; reinstall; rebuild…**
- **Tester's Reasoning**
  - Bug report takes 15 min.
  - Developer won't solve it if it can't be reproduced
  - Don't have a proof it happened
  - Bug-Scrub will not accept it

    ⇒ What's the point? Just move on

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1. Can't reproduce? Report Anyway!

- **Report sporadic, "non-reproducible" bugs**
  - Provide mechanism for counting occurrences
  - Provide mechanism to collect proof and info
  - Align Bug-Scrub procedures to deal with it
- **Actively hunt the repeat offenders**
  - Bugs…. Not Testers….

"Irreproducible bugs become highly reproducible right after delivery to the customer"

Stahl's derivative of Murphy's Law

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2. Once Upon a Time… Weaving a Fairy Tale

- **Tester encounters a bug…**
- **Tester build a fantasy story rationalizing the evidence**
  - It's the environment…
  - It's noise…
  - That's the way its supposed to work…
- **Cognitive Dissonance**
- **Confirmation Bias**

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2. Once Upon a Time… Guilty until proven Innocent

- **"It's a Bug!"**
  - Can you ***prove*** it is not?

"All technology should be assumed guilty until proven innocent"

David Brower, Environmentalist

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3. It's the same Root-Cause…

- **Assumption: A fix to previously reported bug will fix this bug as well**
  - It may very well be…

    … but it may not!

    … or may involve other issues as well!

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3. It's the same Root-Cause…

… So What?

- **We report symptoms, not Root Cause**
  - Educate your developers & testers
- **We must report, if only to make sure we Re-test**

"Never assume the obvious is true"

William Safire, American Grammarian and Writer

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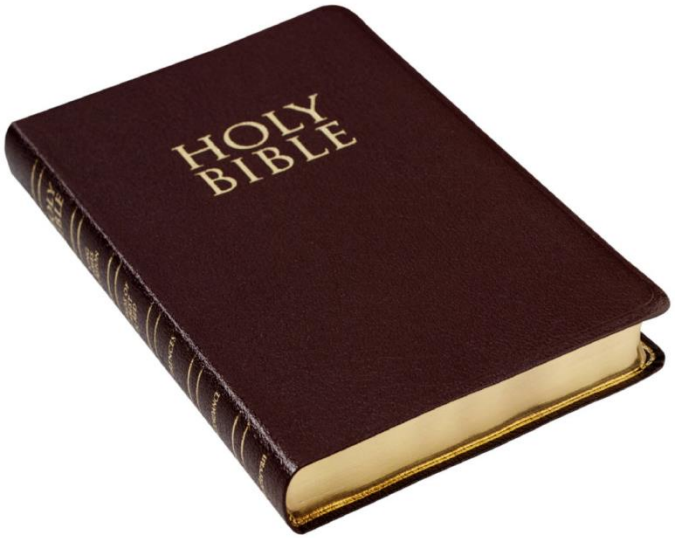
4. Sanctification of the Written Word

- **“If It's in the Spec, It Must Be Right”**
  - Avoiding conflict with Dev
  - A result of past bruises?
- **Narrow-mindedness**

"ראש קטן"



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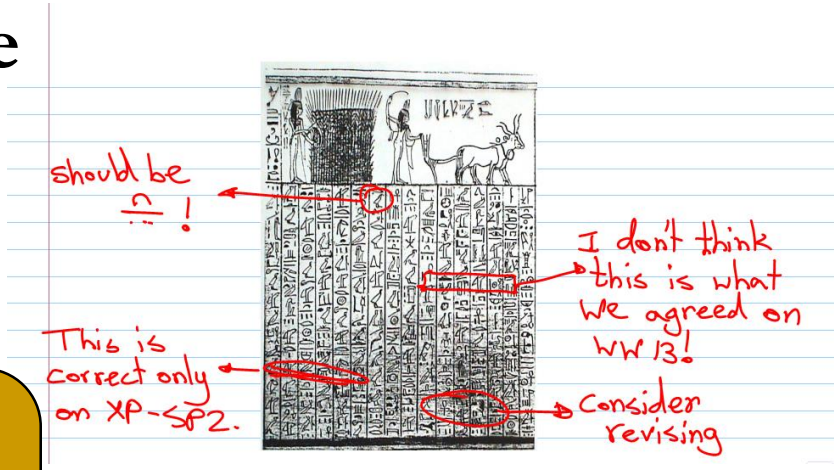
4. The Written Word – It's not the Bible!

- **Remind yourself**
  - How many bugs did you find in the last Review?...
- **Increase the Tester's scope**
  - Encourage critical thinking
  - Represent The User



"Well I got nothing against the Press,
They wouldn't print it if it wasn't true"

"Sunday Papers", Joe Jackson, British musician

Example

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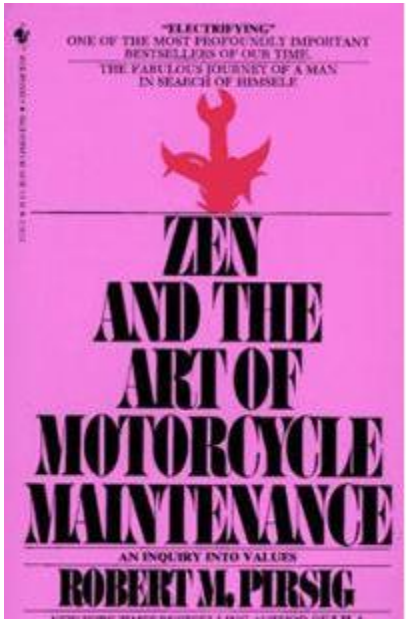
5. "Stuckness" not considered a Bug

- **"Stuckness":**
  - "a mental stuckness that accompanies the physical stuckness of whatever it is you're working on"

(Robert M. Pirsig)



- **Something that stands in the way to "Real Work"**

Example

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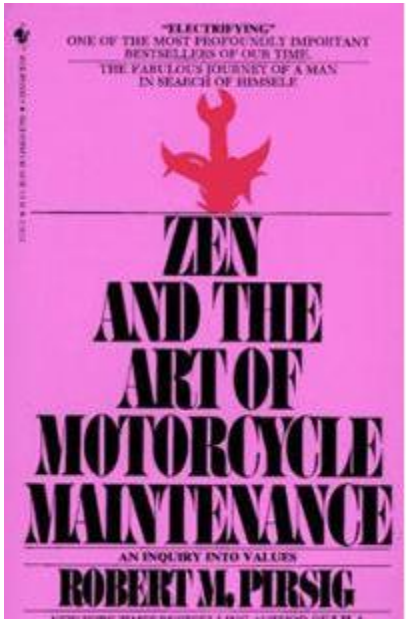
5. "Stuckness" – It's a Bug!

- **Divert the frustration**
  - Initial task:
    - **Install the SW**
    - **Do some tests**
  - New task:
    - **Find bugs in the Installer**



…Oh! This we enjoy!

"Failure is the opportunity to begin again more intelligently."

Henry Ford

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6. One Bug? Two Bugs?…

- **Tester finds two bugs in a single window**
- **Theory:**
  - "Don't report two bugs in one report"
- **Reality:**
  - Takes twice as long
  - Looks like an attempt to inflate bug numbers

- **Result: Two bugs reported in one report**
  - Secondary result: Only one bug is fixed

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6. Two Bugs!

- **Use your Bug-Report system capabilities**
  - Copy and Edit
  - Link bugs
- **Educate why this is important**
  - Find (negative) examples!

"Sometimes, the whole is less then the sum of its parts"

Michael Stahl, SW Test philosopher

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7. It's an Integration Bug

- **Integration: Intensive dev/test interaction period**
  - Testers and Developers work together in the lab
  - Reporting takes time, slows progress
  - Reporting cause friction with developer
  - Most bugs fixed "on the spot" – so what's the point?

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7. Integration Bugs: Find the Middle Ground

- **Be reasonable**
  - Fixed on the spot?
    - **Don't Report**
  - Delayed for any reason?
    - **Report**

- **Arrive to agreement with Dev before Integration starts**

"Don't be Right – Be Smart."

"בכביש אל תהיה צודק – היה חכם"

Road Safety Campaign, Israel

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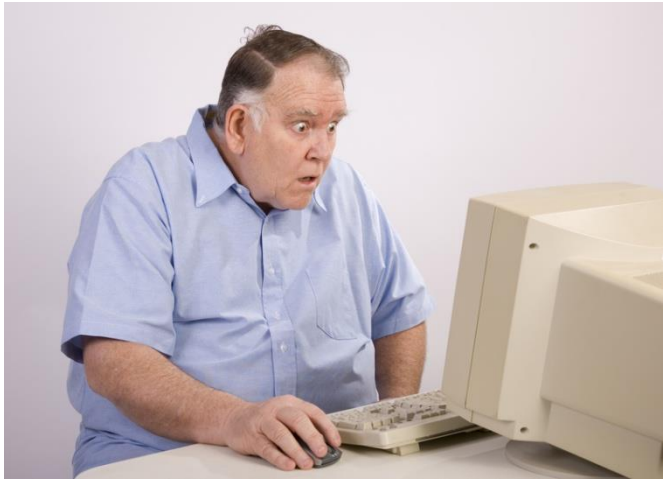
8. Did THAT just happen? … It's Impossible!

- **Ignoring the facts**
  - … as they make no sense
- **Randomly observed bugs**
  - Not sure you even saw this - not the main focus
- **Fear of looking stupid**



Example

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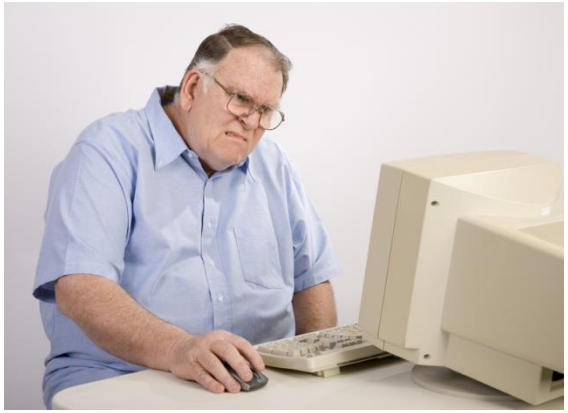
8. Did THAT just happen?

… sure it did!



- **You will need a proof though…**
  - "You can't look at everything at once. Even if you try very hard. " (James Bach, Tools For Recording Exploratory Testing)
  - Record your sessions
    - **Spector (www.spectorsoft.com)**
    - **ScreenHunter (http://www.wisdom-soft.com/sh/sh_free.htm)**

"Better is the sight of the eyes than the wandering of the desire" (טוב מראה עיניים מהלך נפש (קהלת ו', ט')

King Solomon, Ecclesiastes 6, 9

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9. Usability Blindness

- **Accepting bad design and Usability bugs**
  - … not my job
  - … there is a workaround
  - … technically it's OK
- **Thinking like an Engineer**
  - … and not like the User

Examples

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9. Bad Usability – It's NOT OK!

- **Errrr….. It IS Your Job!**
- **The User is much less savvy then you think**
  - Has little patience
  - Won't figure the workaround
  - Will consider it a bug
- **Bad Usability is a Bug**
- **Inconsistency is a Bug**
- **Enlist Marketing to justify this**

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10. Frustration: Giving up in Desperation

- **Not believing the report will change anything**
  - "There are so many more important issues!..."
- **Not believing it is fix-able**
  - "Too deep in the Kitbag"
- **Too much time to report; too small chance for a fix**
  - "Low" bugs; Usability; Annoyances…

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10. Never Give Up!...

- **A single report won't change anything…**
  - … but many – even "lows" – might just do the trick
- **It may be buried deeply…**
  - …but it may get fixed on the next major re-write
- **Reduce reporting overhead**
  - Make reporting extra-easy (e.g. an automated data collection tool)

To create a usable piece of software, you have to fight for every fix, every feature, every little accommodation that will get one more person up the curve. There are no shortcuts. [...] it happens because you fought for every inch.

Dave Winer, American software developer, entrepreneur

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Summary

1. Can't reproduce? Report Anyway!
2. Once Upon a Time… Guilty until proven Innocent
3. It's the same Root-Cause… So What?
4. The Written Word – It's not the Bible!
5. "Stuckness" – It's a Bug!
6. One Bug? Two Bugs?… Two Bugs!
7. Integration Bugs: Find the Middle Ground
8. Did THAT just happen? … sure it did!
9. Bad Usability – It's NOT OK!
10. Frustration… Never Give Up!

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Two more…

… if time allows

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11. I'll (maybe) Be Back!

- **Found a Bug!**
- **File a Report?**
  - Not Now! Later!
- **But…**
  - The symptom disappear
  - …or it gets forgotten
  - …or it feels like irrelevant anymore
  - Or…

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11. Be Back!

- **No magic…**
- **If you have to report later**
  - Collect what you need Now…
  - …so you can report Later
- **Make a habit to report within the same day**
  - Easier said…
  - …but a reasonable goal

> How soon 'not now' becomes 'never'?
>
> Martin Luther (1483-1546)

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A Word of Caution

Sign on the Great Wall in China

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12. Opportunity Cost: Hunting a Low

- **Found a Bug!**
- **It's hard to reproduce…**
  - … but I won't let it get away
- **Three days later**
  - Got it!
  - Suggested Severity: Low
- **It will never get fixed**
- **You knew the severity when you started**

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12. Opportunity Lost

- **Was it really worth it?**
- **It's not like we ship with Zero defects!**
  - Theoretically – the time was well spent
  - But…
    - **It won't be fixed**
    - **Higher severity bugs got away (or stayed longer)**
- **Apply common sense when hunting bugs**

> In theory, theory is the same as practice.
> In practice, it isn't.
>
> Lawrence Peter "Yogi" Berra, Major League Baseball player and manager

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Now go and open some bugs!

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Examples

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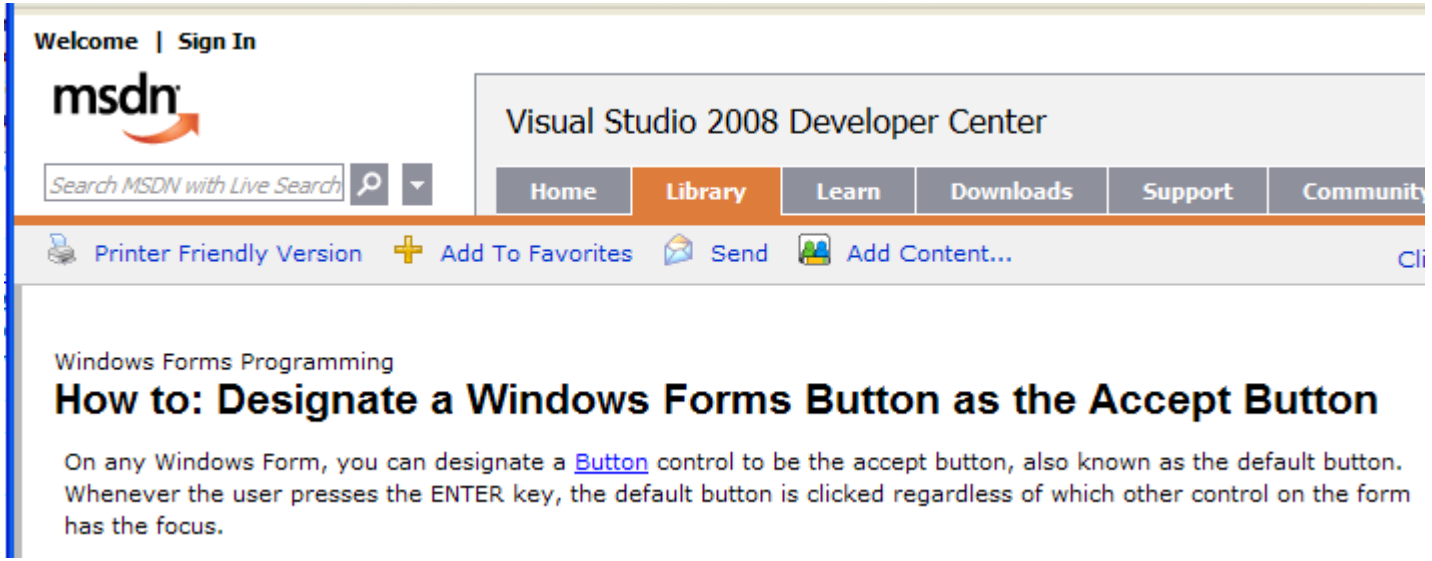
The Written Word

- **Bug: "Enter" does not activate the selected control**
- **Tester: Quoting Microsoft:**
  - http://msdn.microsoft.com/en-us/library/ms229629.aspx



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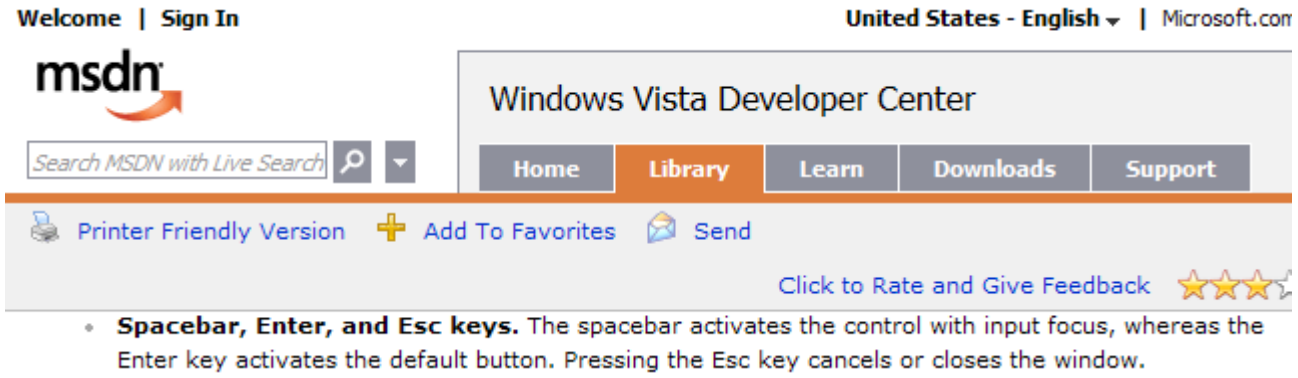
The Written Word

- **Developer: Quoting Microsoft:**
  - https://msdn.microsoft.com/en-us/library/dn742465.aspx



- **Who is right?**
  - The User is right
- **The User is used to Enter activating the selected control**

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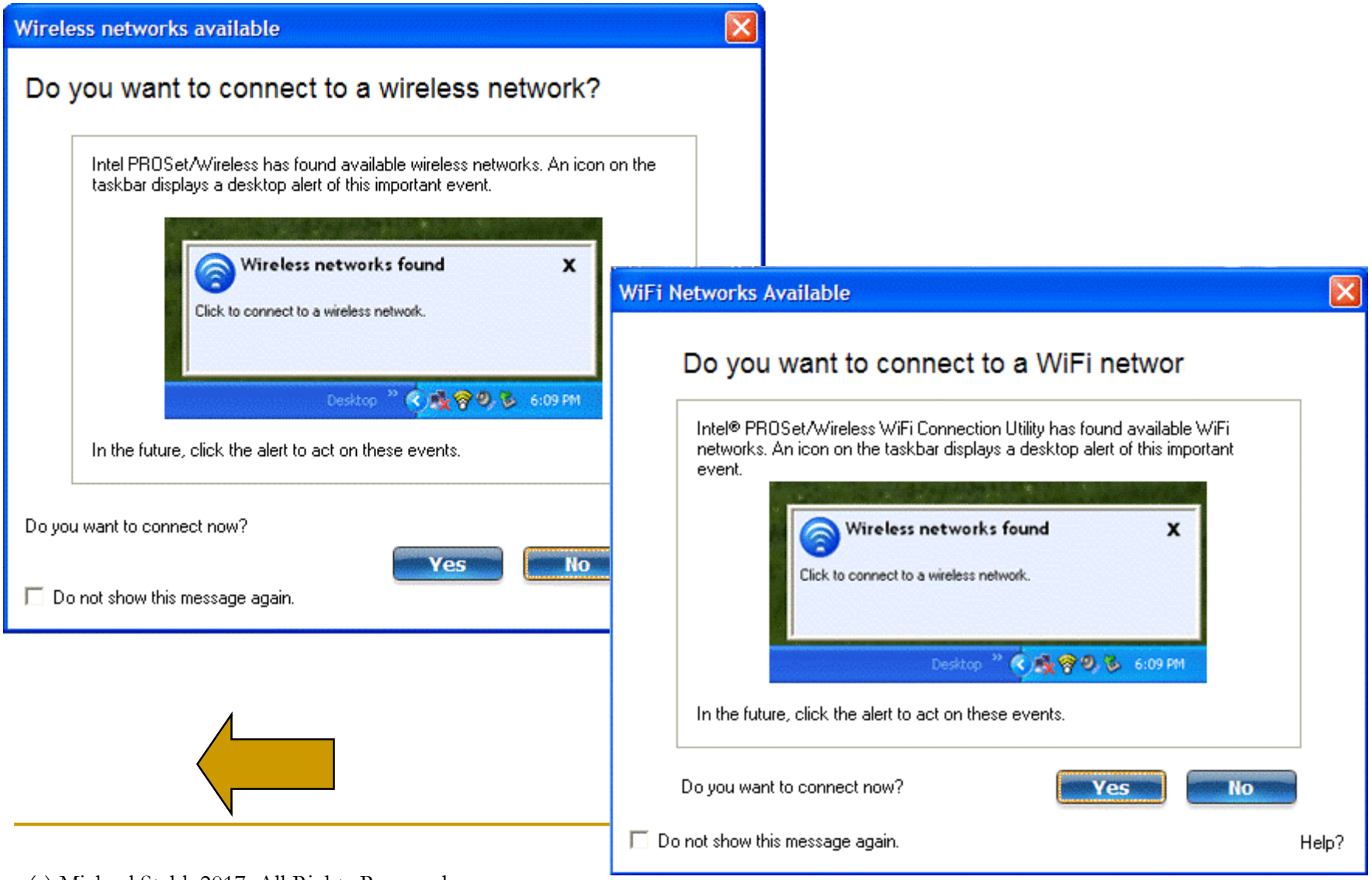
Did That Just Happen?



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Thinking like Engineers

- **Popup during Install**

- **Elementary my dear Watson!... Right?**
- **Was fixed on later releases**

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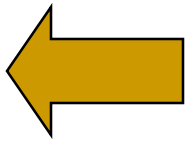
Same action, Different method

- **Add “Line Break” (and not: “Paragraph break“)**
  - Word: Shift-Enter
  - Excel: Alt-Enter



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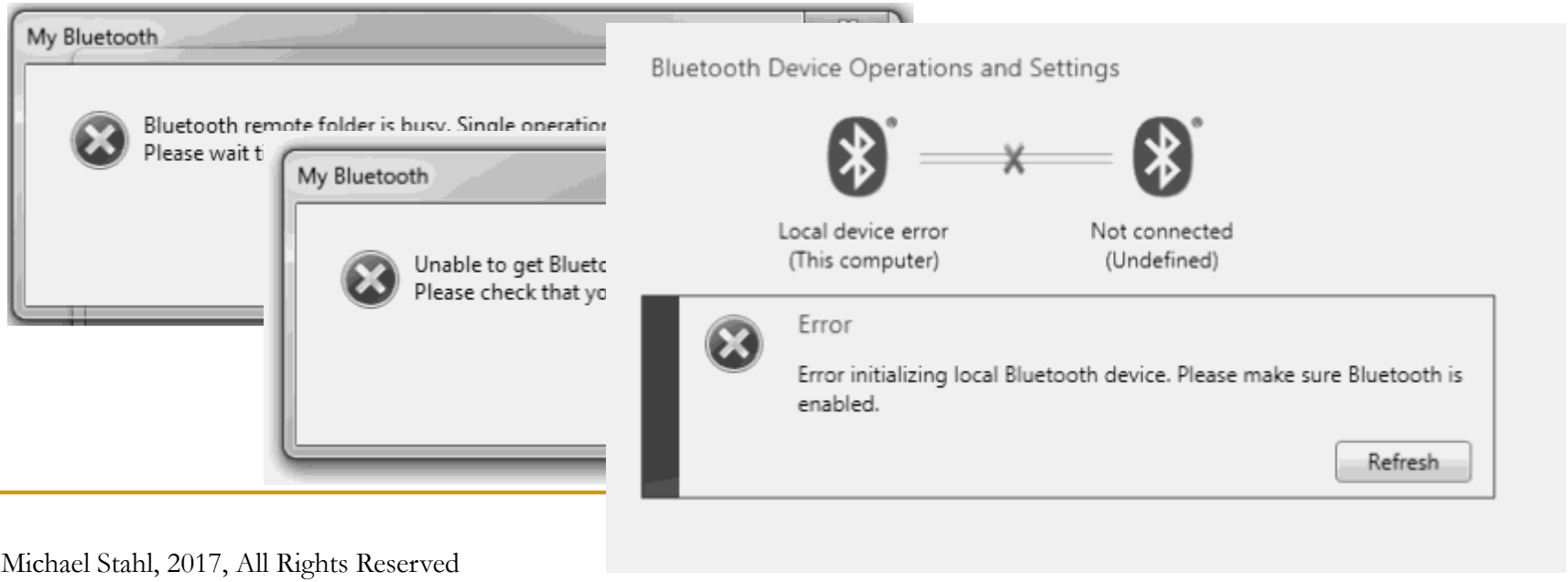
Stuckness

- Task on hand:

FTP client	Undo rename feature does not work after renaming folder	Win7 64	Need to Reproduce

- (1) Connect to FTP server; (2) rename a folder; (3) Undo
- What I get after (1):



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